December 1929

Drug Markets

Established 1914

The Magazine of the Manufacturing Drug Trade

Editorials 537
Give Some to the Consumer—A Chain Wants Fixed Prices—But Why Multiple Suits—Wanted-A Club—A Mercury Contest—The Mutual Craze—A Wholesalers' Association

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Newer Aspects of Price Maintenance 541
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Fine Chemicals 595
Perfume and Flavoring Materials 606
Crude Drugs 612
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Buyer's Guide 524
Index to Advertisers 624

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Coming Issues

The Drug Manufacturer's position to-day is just as different from what it was a year ago as it was then different from the year before.

His Problem of distribution continues with him, and continues to press for a solution that will be both profitable and comforting to him.

The Paths of the retail and wholesale trades are quite well defined, but from the present outlook these branches will work in a way that will restrict the independent manufacturers.

We Will Continue to point out the trend of this phase of the drug manufacturer's business during the coming year. And may we find at the end of the next year a different picture from the one we find to-day.

VOL. XXV **DRUG MARKETS, INC.** NUMBER 6

PUBLISHERS

Publication Office, 28 Renne Ave., Pittsfield, Mass. Editorial and General Office, 25 Spruce St., N. Y. City

Editor THOMAS R. FARRELL
President WILLIAMS HAYNES
Business Manager FRAZER V. SINCLAIR

PUBLISHED MONTHLY AT PITTSFIELD, MASS., SUBSCRIPTION PRICE, TWO DOLLARS A YEAR, IN ADVANCE, POSTAGE PAID TO ALL COUNTRIES; THREE WEEKS' NOTICE IS REQUIRED TO CHANGE SUBSCRIBER'S ADDRESSES, AND WHEN NOTIFYING KINDLY GIVE BOTH OLD AND NEW ADDRESSES. PRINTED BY THE SUN PRINTING COMPANY, PITTSFIELD, MASS. ENTERED AS SECOND CLASS MATTER, JANUARY 1, 1928 AT THE POST OFFICE, AT PITTSFIELD, MASS., UNDER THE ACT OF MARCH 3, 1879.

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For Bleaching...Sterilizing... Disinfecting...Deodorizing...Oxidizing

A stable hypochlorite product

[1] Contains 65% available chlorine.

[2] Exceptionally stable.

[3] Readily soluble in cold water.

[4] Uniform in composition.

[5] A free-flowing powder.

...and other industrial applications

H T H is produced by an exclusive Mathieson process and should not be confused with any other product on the market which is used for bleaching, sterilizing or oxidizing. It is a concentrated material, stable and uniform. The principal component of H T H is *true* calcium hypochlorite—$Ca<^{O\,Cl}_{O\,Cl}$—which until recently existed merely as a formula. H T H contains little free lime or insoluble matter and produces calcium hypochlorite solutions which may often be used without settling.

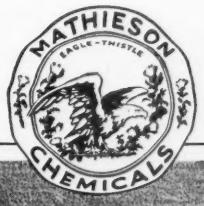
Commercially H T H has many valuable uses. It is convenient, easy-to-use, efficient and absolutely dependable. Samples and further information will be furnished on request.

The MATHIESON ALKALI WORKS (*Inc.*)

250 PARK AVENUE NEW YORK CITY

Philadelphia Chicago Providence Charlotte Cincinnati

Works: Niagara Falls, N. Y. Saltville, Va.



Buyers' Guide

RAW MATERIALS

ALCOHOL

American Commercial Alcohol Corp.
Pennsylvania Sugar Co.
The Rossville Com. Alcohol Corp.
U. S. Industrial Alcohol Co.

AROMATIC CHEMICALS

Dodge & Olcott Company
P. R. Dreyer Inc.
Euro American Corporation
Benj. French, Inc.
Fritzsche Brothers, Inc.
Givaudan Delawanna, Inc.
Magnus, Mabee & Reynard
Newport Chemical Works, Inc.
Pfaltz & Bauer, Inc.
Schering Corporation
Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

BEESWAX

Theodor Leonhard Wax Co., Inc.
Will & Baumer Candle Co., Inc.

BIOLOGICAL CHEMICALS

Wilson Laboratories

BORAX

American Potash & Chemical Corp.
Pacific Coast Borax Co.

COLLOIDAL CLAY

E. Fougera & Co.

CHALK, PRECIPITATED

H. J. Baker & Bro.
Industrial Chemical Sales Co., Inc.
John & E. Sturge, Ltd.

COD LIVER OIL

H. J. Baker & Bro.
P. R. Dreyer, Inc.
E. M. Javitz & Son
Norwegian Cod Liver Oil Association

COAL-TAR PRODUCTS

Baird & McGuire, Inc.

CRUDE DRUGS

J. L. Hopkins & Co.
McIlvaine Brothers, Inc.
S. B. Penick & Company

DISINFECTANTS

Baird & McGuire, Inc.

ESSENTIAL OILS

California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer, Inc.
Euro American Corporation
Benj. French, Inc.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard
Newport Chemical Works, Inc.
Pfaltz & Bauer, Inc.
Plaimar, Ltd.
A. M. Todd Co.
Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

FLAVORING MATERIALS

California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer, Inc.
Euro American Corporation
Fritzsche Brothers, Inc.
Magnus, Mabee & Reynard
Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

GELATINES

Coignet Gelatines

GLYCERIN

H. J. Baker & Bro.
Will & Baumer Candle Co., Inc.

LANOLIN

E. M. Javitz & Son, Inc.
Pfaltz & Bauer, Inc.

MEDICINAL CHEMICALS

Abbott Laboratories
J. T. Baker Chemical Co.
Chas. Cooper & Co.
Dow Chemical Co.
Heyden Chemical Corp.
Hoffman-LaRoche Chemical Works, Inc.
Mallinckrodt Chemical Works
Merck & Co., Inc.
Monsanto Chemical Works
Chas. Pfizer & Co., Inc.
Schering Corporation
Wilckes-Martin-Wilckes Co.

MINERAL OIL

M. W. Parsons Imports
Schliemann Companies, Inc.

QUININE

R. W. Greeff & Co.
Mallinckrodt Chemical Works
Merck & Co., Inc.

SHAVING CREAM BASE

John Powell & Co., Inc.

VANILLIN

Euro American Corporation
Givaudan Delawanna Inc.
Mathieson Alkali Works, Inc. (Commonwealth Division)
Monsanto Chemical Works

CONTAINERS

BOTTLES

Carr-Lowrey Glass Co.
Owens-Illinois Glass Co.

BOXES (Corrugated)

Container Corp. of America
Hinde & Dauch Paper Co.

BOXES (Paper)

F. N. Burt Co., Ltd.

CANS

American Can Co.

COLLAPSIBLE TUBES

Aluminum Co. of America
Bond Mfg. Corporation
New England Collapsible Tube Co.
Sun Tube Corp.
White Metal Mfg. Co.
A. H. Wirz, Inc.

CLOSURES

CORKS

Armstrong Cork Co.

INSIDE THREAD CAPS

Spring Stopper Co.

METAL CAPS

Aluminum Co. of America
American Metal Cap Co.
Crown Cork & Seal Co.
Ferd. Gutmann & Co.
National Seal Co.
Phoenix Hermetic Co.

MACHINERY & EQUIPMENT

FILLING MACHINES

Alsop Engineering Co.
American Machine & Foundry Co.
Arthur Colton Co.
Horix Manufacturing Co.
The Karl Kiefer Machine Co.
F. J. Stokes Machine Co.

MIXING EQUIPMENT

Alsop Engineering Co.
Arthur Colton Co.
Mixing Equipment Co.
F. J. Stokes Machine Co.

WEIGHING EQUIPMENT

American Machine & Foundry Co.

PACKING & CARTONING

American Machine & Foundry Co.
Package Machinery Co.

LABELLING EQUIPMENT

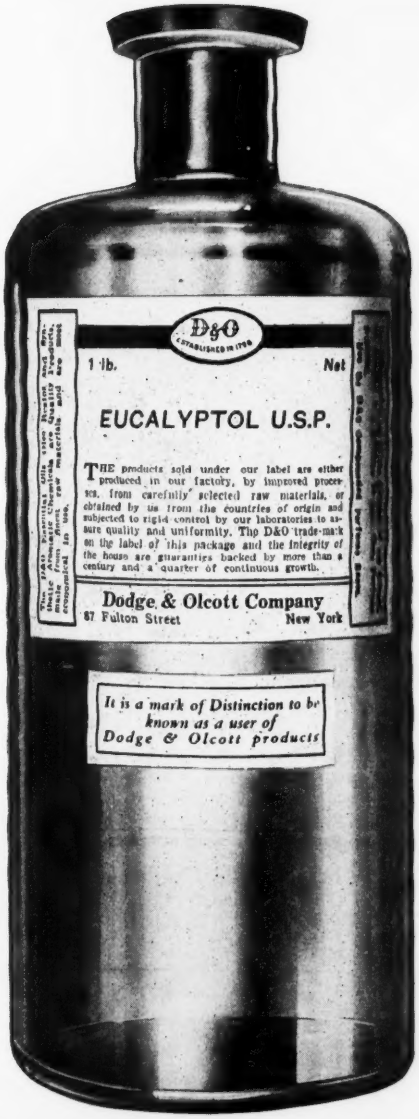
Economic Machinery Co.

PHARMACEUTICAL MACHINERY

Arthur Colton Co.
F. J. Stokes Machine Co.

D&O
ESTABLISHED IN 1798

ESSENTIAL OILS
and Kindred Products


D&O
ESTABLISHED IN 1798
1 lb.
Net
EUCALYPTOL U.S.P.
THE products sold under our label are either produced in our factory, by improved processes, from carefully selected raw materials, or obtained by us from the countries of origin and subjected to rigid control by our laboratories to assure quality and uniformity. The D&O trade-mark on the label of this package and the integrity of the house are guaranties backed by more than a century and a quarter of continuous growth.
Dodge & Olcott Company
87 Fulton Street
New York
It is a mark of Distinction to be known as a user of Dodge & Olcott products

Better

than a mere
claim for high quality!

It is a D & O product.

DODGE AND OLCOTT COMPANY
87 Fulton Street New York City

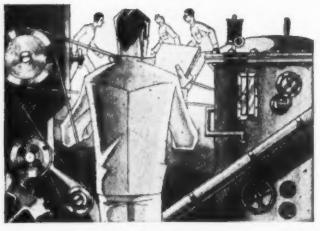
"The integrity of the house is reflected in the quality of its products."

Thruout the year, just passed, there has appeared in this magazine a series of articles about a mythical organization, styled *Yourr* Chemical Corporation. Its problems of manufacturing, packaging and selling, however, have been very real . . . comparable, perhaps, to some of your problems.

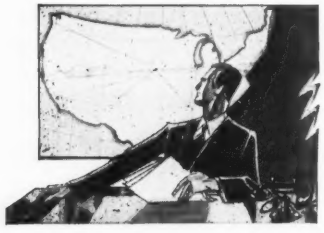
If you have missed any of these articles and would like to have a bound copy of the complete series, it will be ready for distribution about January 1, 1930. Address the Promotion Department, Phoenix-Hermetic Company, 2444 West Sixteenth Street, Chicago, Illinois.

What Are *Yourr* Plans?

Yourr Purchasing Agent



Yourr Production Man



Yourr Sales Manager

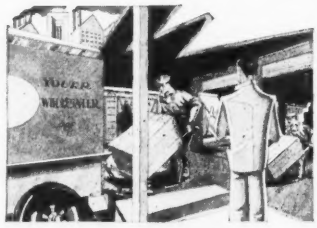
THE MONTHS swing by. Almost before you realize it, the year has passed. What has been attempted; what has been done? The discovery of a new or better raw material . . . an improved process of manufacture or packaging . . . the development of new markets . . . a change in method of distribution?

Some of these things have aided the progress of *Yourr* Chemical Corporation . . . some have not. As you review the past year, and plan for the next, what is it to be . . . a new product, or a new and improved glass package?

Can we be of help?

PHOENIX-HERMETIC COMPANY
Metal Caps for Glass Packages
CHICAGO NEW YORK
Branch Offices in Ten Principal Cities

PHOENIX
Metal Caps

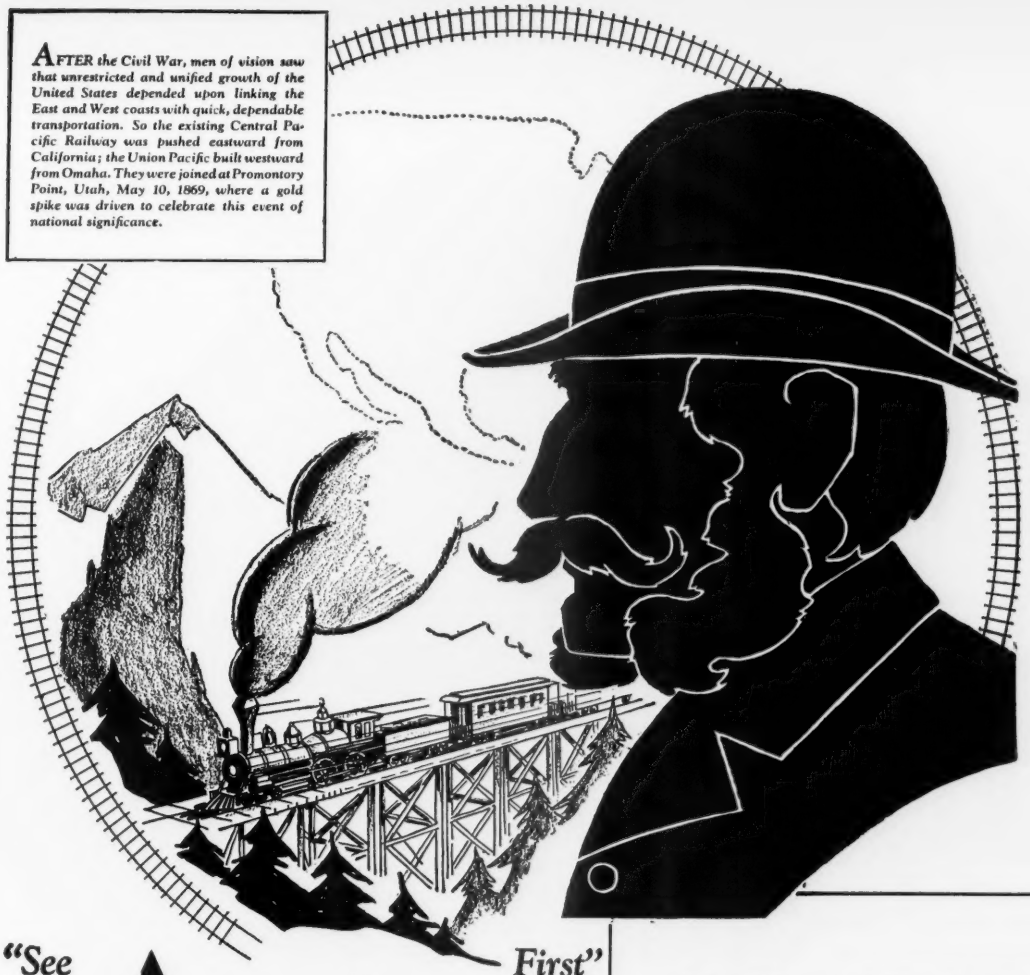


Yourr Wholesaler

Yourr Retailer

Yourr Consumer

AFTER the Civil War, men of vision saw that unrestricted and unified growth of the United States depended upon linking the East and West coasts with quick, dependable transportation. So the existing Central Pacific Railway was pushed eastward from California; the Union Pacific built westward from Omaha. They were joined at Promontory Point, Utah, May 10, 1869, where a gold spike was driven to celebrate this event of national significance.



"See American First"

American

Odorless, Colorless, "Everclear" Alcohol

USERS of "Everclear" Alcohol secure that excellence in drug manufacture which originates solely in purity.

This outstanding feature of "Everclear" is immediately apparent through its complete lack of odor and its remarkable clearness. This fine purity is the result of an exclusive distillation process originated by us at our plant in the heart of the grain belt.

The high standard of "Everclear" is guaranteed constant. Therefore, you may safely standardize on it.

This is number 10 of a series depicting historical periods in the development of America

"SEE AMERICAN FIRST"

COMMERCIAL ALCOHOL CORPORATION

420 Lexington Avenue, New York, N. Y.

Plants:

Pekin, Ill. Gretna, La. Philadelphia, Pa. Sausalito, Cal.

Sales Offices and Warehouses

BALTIMORE, MD., 514 South Eutaw St.
BIRMINGHAM, ALA., *Gage & Hulsey*, 719 Pioneer Bldg.
BOSTON, MASS., 50 Eastern Ave.
BUFFALO, N. Y. *Rolls Chemical Co.*, 481 Ellicott Square Building
CHICAGO, ILL., 1006 South State St.
CINCINNATI, OHIO, *M. I. Daly*, 605 Gerke Bldg.
CLEVELAND, OHIO, *R. H. Nicholas Co.*, 2171 West 3rd St.
DETROIT, MICH., *H. L. Holland & Son*, 945 First National Bank Bldg.
GRAND RAPIDS, MICH., 214 Ellsworth Ave., S. W.
GRETNA, LA.
INDIANAPOLIS, IND., *August Hoffman*, Majestic Bldg.
KANSAS CITY, MO., *Thompson Hayward Chemical Co.* 29th and Southwest Blvd.
MEMPHIS, TENN., *Lilly Brokerage Co.*, 480 Union Ave.
MINNEAPOLIS, MINN., *W. H. Barber Co.*
NASHVILLE, TENN., *Post Brokerage Co.*
NEW YORK, N. Y., *B. & O. Stores*, 26th St. & 11th Ave.
OMAHA, NEBR. *Kohn Bros. Brokerage Co.*, 1122 Harney St.
PEKIN, ILL.
PHILADELPHIA, PA., Delaware Ave. and Tasker St.
PITTSBURGH, PA., *E. E. Zimmerman Co.*, Fulton Bldg.
ST. LOUIS, MO., 1100 North Levee St.
ST. PAUL, MINN., 2694 University Ave.
SAN FRANCISCO, CALIF., 369 Pine St.
TOLEDO, OHIO, *M. I. Wilcox Co.*, 210 Water St.
WICHITA, KANS., *United Sash and Door Co.*

ALCOHOL EVERCLEAR ALCOHOL

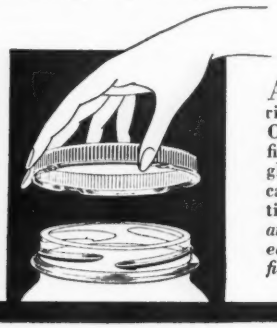
REG. U. S. PAT. OFF.

. . . the Right Closure for MEDICINE CLOSET Products

Used a little at a time, they must be packed so that they can be easily opened—and easily and effectively reclosed. Amerseal Caps—designed for feminine hands—are removed by a quarter-turn—effectively and easily re-applied by a second quarter-turn.

The closure that caps such packages must be a sure safeguard against evaporation and deterioration . . . Amerseal Caps can be relied on. They're used successfully on the most volatile products.

In view of the intensive competition in the drug field good looks and display value must be considered . . . Amerseal Caps, lithographed with your firm name, slogan or trademark add greatly to display value and ease of identification.



A quarter turn to the right applies the Amerseal Cap. The lugs, formed to fit the contour of the glass threads, draw the cap down and effect a tight uniform contact *around the complete top edge of the container finish.*

Naturally, with competition what it is today, cost must be carefully considered when selecting the closure for the package . . . Amerseal Caps are low in first cost. Tested by one of the largest packers in glass in competition with another nationally known closure, Amerseal Caps were applied by automatic capping machines three times as fast as the competitive cap. Capping by hand four Amerseals were applied in the time needed to apply one of the other closures. Big savings in capping costs almost inevitably result from the use of Amerseals.

Amerseal Caps by satisfactorily fulfilling all of the above qualifications over a period of years have unquestionably proven themselves the right closure for medicine closet products. May we show you how efficiently and economically they can be used on yours?

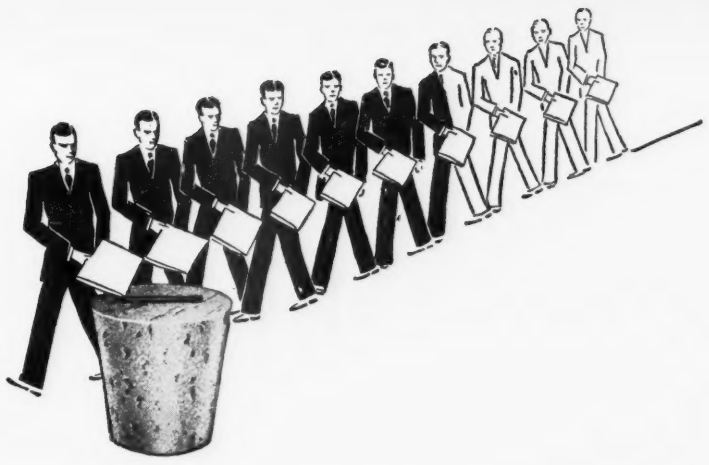
THE AMERSEAL CAP

AMERICAN METAL CAP COMPANY

2 Summit Street **Brooklyn, New York**

Eighteen Branch Offices to Most Efficiently Serve You

Atlanta	Houston	Philadelphia
Baltimore	Los Angeles	Pittsburgh
Boston	Louisville	Rochester
Chicago	Minneapolis	St. Louis
Cleveland	Newark	San Francisco
Detroit	New York	Seattle



We PREFER CORKS!

That's how sixty-five out of every hundred druggists voted, according to Nielsen Survey . . .

DO DRUGGISTS who, as a class, have more experience with bottles and bottle closures than any other one group, prefer good corks or metal caps? You have wanted the true answer to that question . . . so have we. And that is why we asked the A. C. Nielsen Company, Chicago, to make an impartial survey for us.

They did. They wrote to druggists in every state, 25,000 in all. "We have just been authorized by a prominent manufacturer to conduct an impartial investigation in a matter of considerable interest to you," their letter began. The name of Armstrong Cork Company did not appear either on the card or in the letter.

The result? Exactly 6390 replies were received. For bottles used in their own prescription work, 4017 druggists or 65.8% preferred corks. For bottles containing liquids used in compounding their prescriptions, 3713 druggists or 64.3% preferred corks. Merging these, we find that 65.1% voted for corks.

A summary of the A. C. Nielsen Company report includes the following statement: " . . . the general preference is for 'good corks' in the ratio of about 65 to 35, because of strong advantages of outstanding importance in: cleanliness of handling and storing; freedom from leakage and consequent discoloration; ability to preserve contents from contamination; resistance to corrosion; freedom from sticking; ease and convenience in handling; ease of pouring and freedom from spilling and waste; economy."

Here you have the answer. We will gladly send you a copy of the complete report on request. Address your request to the Armstrong Cork Company, 913 Arch St., Lancaster, Pennsylvania.

A. C. Nielsen Company, Chicago, Ill.
For closing our prescription bottles we prefer—
☐ Metal Closures ☐ Good Corks

Our principal reasons are_____

We prefer that bottles containing liquids used in compounding prescriptions and other preparations in our store be closed with—
☐ Metal Closures ☐ Good Corks

Our principal reasons are_____

Signed_____

City and State_____

NOTE:—Your name will not be used in any way whatever; in fact you needn't sign your name at all unless you want to.

The position of "good corks" and "metal closures" on these cards was alternated to give equal advantage to each choice.

Armstrong's Corks

SCIENTIFIC ACCURACY
A safeguard of satisfaction

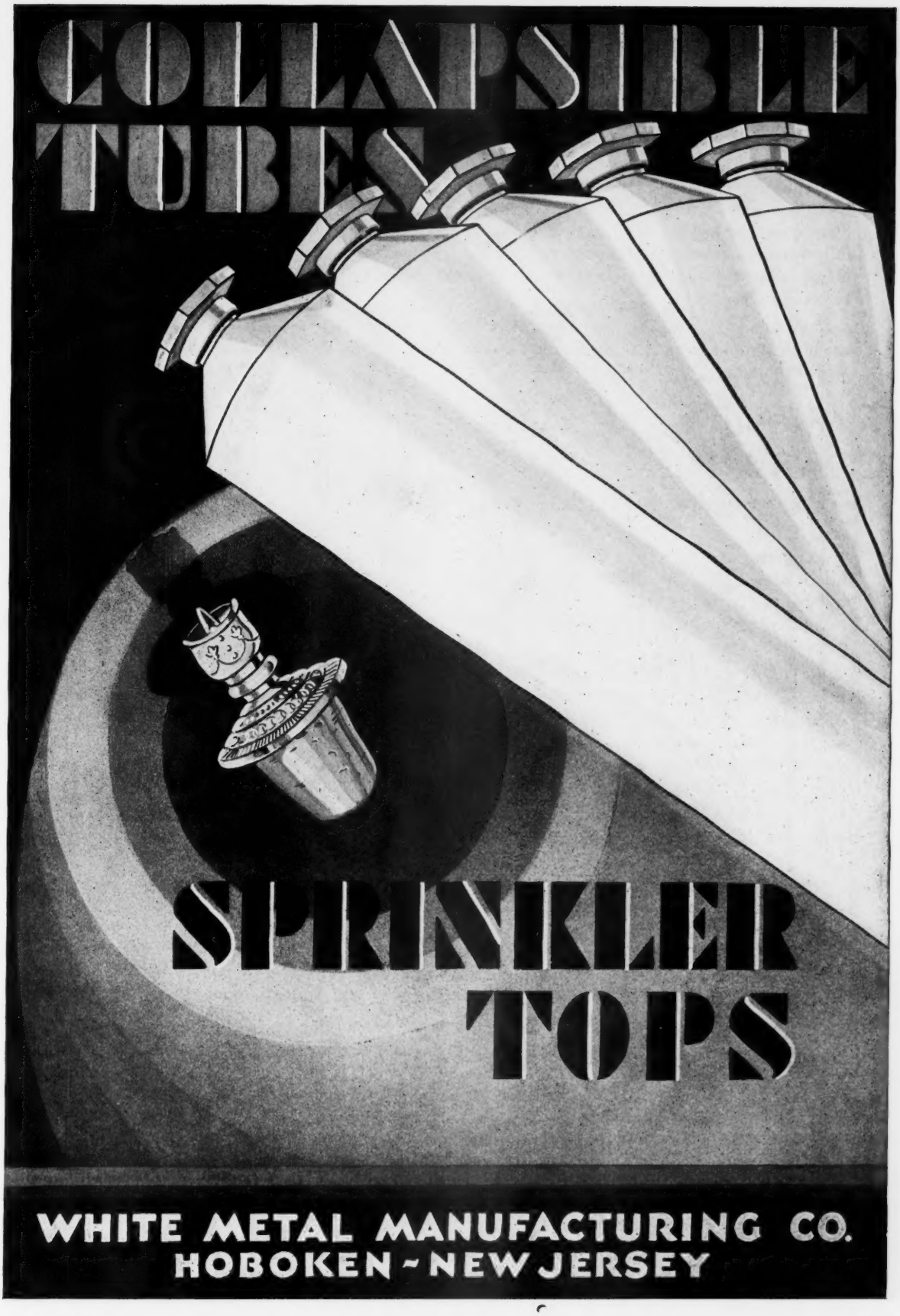
THE famous research laboratories that this company maintains are known the world over for the work they have accomplished in aiding industry to overcome bottling and sealing troubles. They represent one of the most complete and extensive individual undertakings in the field of industrial research—they have given constructive assistance representing savings of millions of dollars in the bottling and sealing of a vast line of products ranging from soft drinks to chemicals.

CROWN SCREW CAPS

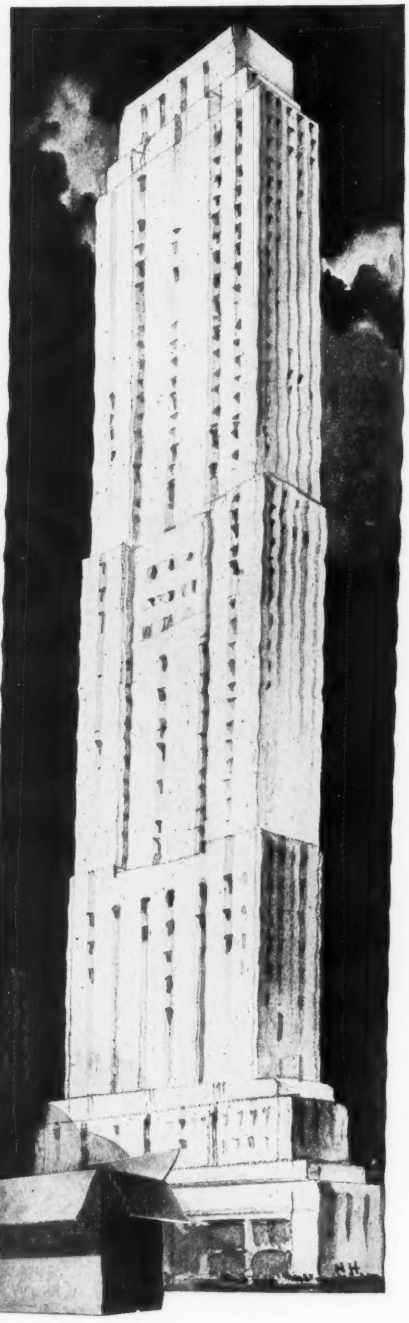
The perfecting of special liners to meet the particular condition of every product is a feature of the work of these laboratories which has made the Crown Screw Cap the most satisfactory, safe and efficient that the Drug Manufacturer can use. The facilities of these laboratories are available to you at any time they can be of help in your operation. Call upon them for technical assistance. Write today for complete information regarding this better seal—*gauge tested for accuracy*—and a sales builder through its convenience and advertising features. Handsomely designed and beautifully lithographed, Crown Screw Caps are an asset on many of the country's largest glass packaged products.

Write today for samples and complete descriptive data.

Crown Cork & Seal Co.
Baltimore · Maryland
Makers of the AXA Crown
(THE FAMOUS CLOSURE FOR WIDE MOUTH GLASS)


COLLAPSIBLE
TUBES
SPRINKLER
TOPS
WHITE METAL MANUFACTURING CO.
HOBOKEN ~ NEW JERSEY

TO DESIGN A MODERN SKYSCRAPER— only a Skilled Architect



Building a modern skyscraper involves more than the laying up of brick or stone according to desired appearance, floor space and height. Designs must be created, plans carefully worked out and specifications accurately calculated to insure due strength and permanence without excessive weight or cost of materials.

Only to a skilled architect can such an important job be entrusted with confidence—his training and experience are absolutely vital.

To Design the right . . . CONTAINER only a Package Engineer

In the proper designing of a shipping container more must be considered than mere shape and dimensions. Shipping weight, packing room labor costs, storage necessities, merchandising requirements, ample protection without excessive cost—these are all factors to be dealt with.

50 H & D Package Engineers are daily solving complex shipping container problems for a widely diversified range of products. Their experience and skill have saved thousands of dollars for shippers everywhere. Their recommendations are scientific, sound and practical.

The services of these men—backed by the resources of the world's largest corrugated fibre box making organization—are available to you without charge or obligation. If you have a packaging problem—send for an H & D Package Engineer.

The coupon below will bring you a copy of the latest H & D booklet on scientific packaging in your industry..

THE
HINDE & DAUCH PAPER CO.
213 Decatur Street Sandusky, Ohio

HINDE & DAUCH *corrugated fibre* SHIPPING BOXES

H&D

THE HINDE & DAUCH PAPER CO., 213 Decatur St., Sandusky, Ohio
Please send a copy of "How to Pack It" to

Name .....
Address .....
Town .....
We are interested in packing .....

Carr-Lowrey
Bottles

BRILLIANT FLINT GLASS BOTTLES, correct in capacity, *accurate in finish, for the* PHARMACEUTICAL and PROPRIETARY trade.

Let us quote on your requirements.

CARR-LOWREY GLASS COMPANY

BALTIMORE, MARYLAND

New York Sales Office:
Room 405, Liggett Building
41 East 42nd Street

FAMOUS SEALS

The Seal of Napoleon as Emperor

The Duplex Seal

A PERFECT SEALING & RE-SEALING CAP FOR GLASS BOTTLES, JARS & TIN CONTAINERS

The Seal of Efficiency

Off and on with a quarter turn of the wrist! That's the way the famous Duplex Seal works. Your customers don't need a monkey wrench or a crowbar when Duplex is used. It never sticks—it never jams—it never "freezes."

The Duplex Seal is a *positive* seal and re-seal. The customer *must* replace it right *and tight*. There's no other way for it to go on.

So a Duplex Sealed product remains in its original perfect condition no matter how many times it is used and then put away again.

That's one of the reasons why so many manufacturers of fine proprietaries, pharmaceuticals and toilet requisites seal with the Duplex Seal—and also find the price satisfactory.

NATIONAL SEAL CO., INC.

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869 Folsom St., San Francisco, Calif.

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MALLINCKRODT CHEMICAL WORKS

SAINT LOUIS MONTREAL PHILADELPHIA NEW YORK

Drug Markets

Vol. XXV DECEMBER 1929 No. 6

Give Some to the Consumer

WHILE the distributive branch of the drug industry is solving its problem, the solution does not square with the best interests of the drug manufacturers. The development has been co-operative or mutual in nature—that is co-operative with the retail druggist, not with the manufacturer. The present set-up in the field of wholesale druggists and independent retailers promises to do much for both these branches of the drug trade, but it also promises very definitely to check the progress of those drug manufacturers who do not change their ways.

THAT the manufacturers have in large measure realized this fact is evidenced by repeated attempts to mutualize their interests with those of the druggist. And the increased efforts of manufacturers to overcome the effects of wholesalers' own interests, as well as to overcome the lack of positiveness in merchandising through the wholesalers, are bound to increase as the private brands of our leading wholesale groups finally take hold and make greater inroads on manufacturers' sales.

BUT to our minds the efforts of the manufacturers to circumvent the resistance or lack of assistance on the part of the wholesalers have been largely in the wrong direction. These efforts have not been based upon producing the greatest results per unit of cost, but rather at employing any means of increasing sales no matter what the cost. Volume for volume's sake, will not lead to financial soundness. Sooner or later forced merchandising will be proven faulty by the consumer who will seek those items, the selling prices of which do not victimize him as a result of the forcing behind them.

DIRECT distribution and sales effort; consumer advertising of various types; dealer co-operation, and all other forms of increasing the urge of everyone to speed the movement of products—all must be regarded merely for what they are worth. They must produce commensurate with their cost or they cannot be employed. As production managers have long been told, competition permits only of the most efficient methods.

EFFECTIVELY to meet the competition of private brands, manufacturers must strike at the thing that gives these brands their greatest appeal—an attractive price to the consumer. Dealer co-operation is valuable; advertising is valuable; but none of these aids can long be purchased at prices far beyond their intrinsic worth, particularly if, at the crucial moment of purchase, the consumer utterably disregards them all because of a lower price.

DESPITE their closeness to the revolution in the distribution set-up—caused solely by the fact that cheaper performance of any function will eventually displace or change all other methods—many manufacturers have failed to recognize the same fundamental weakness in their own positions. It was the consumer who made the change in distribution possible because he was willing to help those who sold him for less. It will be the consumer who will eventually force the manufacturers to stop adding to their costs instead of reducing their selling prices.

A Chain Wants Fixed Prices!

Particularly interesting in the month's events in the drug trade is the statement of D. C. Keller, president of the Dow Drug Company, that he now favors price maintenance, whereas formerly he bitterly opposed it. This is the first time, to our knowledge, that the guiding spirit of a leading drug chain store system has repudiated the *modus operandi* that was supposed to be their sole means of success.

There is little that is new on the subject in Mr. Keller's statement, and practically everything that he has said in support of this legislation has been said by retailers' representatives before. The only part of Mr. Keller's statement that is unique from the retail side of the fight is his reluctance to favor a condition that, in his opinion, does not constitute an ideal condition, but rather the lesser of two evils.

It is amusing, however, to have Mr. Keller say that he has "a strong and growing suspicion that existing demoralization in retail prices is largely due to manufacturer's own actions, and that secretly he is not unwilling that things should be as they are." He says that the manufacturer now takes refuge in the argument that any effort on his part is unlawful and will subject him to punishment.

Does Mr. Keller really blame a manufacturer not only for refusing to attempt price maintenance under existing legislation, but also for refusing to be in favor of the suggested legislation. And does Mr. Keller really think that the large majority of manufacturers are going to make other than a perfunctory attempt to aid the passage of such legislation when they know that the proposed conditions would only result in giving the distributors a decided advantage over the manufacturers.

Co-operation is splendid, but it must react to the benefit of both parties, and it must be understood that both parties are co-operating solely for their own interests. At the present time we see very little chance for any of the channels of distribution to offer any real co-operation to the manufacturers. Chains particularly have not been conducive to other than bought and paid for merchandising aid, and the large wholesale groups are now in the same category. The wholesale and retail branches of the drug trade are quite well affiliated, and everyone knows what might happen in a three-cornered combination. From the present set-up in the drug trade it appears that drug manufacturers had best place their own interests way out in front.

But Why Multiple Suits?

Multiple seizures, says Dr. Campbell, have only been used in a few instances, and we will admit that most of the instances he cites of the use of this practice in the drug trade are most flagrant from the point of view of fraud. We have no quarrel with the Food, Drug and Insecticide Administration for removing such fraudulent offerings effectively and completely from the market.

But we do not think that the statement made by Dr. Campbell in defense of its practice presents the proper picture from the point of view of drug manufacturers. It is not the use of multiple seizures completely to remove from the market such products as are cited by Dr. Campbell, to which the drug trade voices its main objection. Any manufacturer that is worthy of a place in the industry will not attempt to justify such fraud as perpetrated in these instances. But how about the number of threats in lesser cases? Or if threats were not made, how about the realization of legitimate manufacturers that the Administration possessed this all-powerful weapon which they could use if they did not like their actions?

It appears difficult to find a solution of the present conditions. Legitimate manufacturers want to stop fraud and deception in their industry. At the same time they do not want longer to expose themselves to such a means of putting them completely out of business. It is quite possible that the Administration might be willing to find some way to separate multiple seizures from its twin sister "multiple suits" which now always accompanies it.

Certainly if a product is completely removed from the market pending the trial of the case, the law has been served and the public has been protected. Is it then necessary to completely destroy the offender by dragging him from court to court at great expense until he either surrenders or meets a judge that will rule in favor of the Government? We do not think that Dr. Campbell's statement at all justifies the practice of "multiple suits," no matter how much or how little it justifies the practice of multiple seizures.

Wanted --- A Club

Warnings have often been sounded both by government officials and business men themselves that the government will step in and control the various industries if the industries fail properly to regulate themselves. As conditions become more flagrant in the various industries, applications are made for the Federal Trade Commission to step in—first by citing certain concerns for unfair competition, and secondly by holding a trade conference for the entire industry.

The conferences with the Federal Trade Commission promised much at first. But when the opinion was given that the government would not stand fully behind an industry that agreed to certain practices—the committment of which were not illegal, but an agreement upon which was not illegal—the promise of progress by this means very largely disappeared. The signers of a set of fair trade practices under such conditions, could immediately violate their agreement without fear of any real prosecution. And the fact that no government prosecution is forthcoming as a result of violation of these agreements makes the agreements worth little more than the paper upon which they are written.

If business is to regulate itself and thus protect the country from the economic evils of unfair competition, the government must stand behind business when it attempts to bring its offending members into line. It is very easy for the government with its almost unlimited authority to tell industry to cleanse itself. But it is a foregone conclusion that some members of each industry will refuse to correct their ways unless a club is held over their heads. It is up to the government to give to those who are to do the correcting the club that the government would use if it were to do the correcting itself.

The Mutual Craze

Mutual schemes and mergers have suffered a severe set-back from the settling of common stock values. Offers by Vick Financial Corporation and McKesson & Robbins to take back such stock as they sold to retail druggists based on former values indicates the extreme danger that accompanies the sale of such stocks to distributors. Not that it has been proven that either of these stocks were not worth all that the buyers paid for them or that they will be worth far more some day, but for the time during which the owners of the stocks cannot sell them for more than they paid for them, their enthusiasm for the company who sold them is decidedly dampened. On the other hand, the action of these companies in taking back these stocks and thus saving these buyers what seemed like at least a temporary loss has just the opposite effect.

The stock in Squibb Plan, Inc., sold to drug retailers by E. R. Squibb & Sons, is said by officials of that company to be free of stock market influences and will stay sold. The fact that this stock is an investment in a company that a small number of shares closely held, fortunately enough keeps its value from moving up and down in a hectic fashion. Holders of the stock are therefore free from worry as to its declining in value, but they are also quite free from the hope that arises in owners of those stocks that fluctuate widely.

The disadvantages of inviting distributors to become stockholders in a company whose goods it distributes were ably pointed out by Dr. Copeland in our last issue. We feel exactly as Dr. Copeland does about it. Why should a manufacturer attempt to overcome resistance to his products by endangering his own freedom of action? And why should he place the conduct of his company in the hands of those who have very little love for him anyway ?

A Mercury Contest

Evidently Mercurio Europeo—the syndicate controlling the Spanish and Italian quicksilver mines—intends not only to advance prices for the metal above the present dizzy levels, but also to attempt to create conditions that will make these levels justifiable from the point of view of supply and demand. Obviously—since production figures are now above anything previously recorded and stocks are greater than ever before in history—the only way in which the high prices can be justified is by increased consumption.

The monopoly blandly admits that mercury consumption has not increased despite the new uses that are at present taking considerable quantities. The fact is, says the monopoly, that the mercury boiler and mercury vapor tubes used in advertising signs have little more than offset the loss of consumption in the color and instrument industries. But in the face of this condition they are now advancing prices and maintaining

production at peak levels despite the fact that America can now profitably produce more than half her consumption, and despite the fact enormous stocks make the real statistical position of the market decidedly weak.

The contest that has been inaugurated with a first prize of £5,000 to produce new avenues of consumption for quicksilver appears to be a desperate stab in the dark. Evidently there is no time to wait for the slower but surer method of establishing fellowships at the various universities. Or perhaps the monopoly has not even the remotest idea where these new uses will be found and therefore, would be unable intelligently to establish these fellowships at the proper places.

We really think that the monopoly is going about their problem in the wrong way. For if they have any sense at all they must realize that the first thing a consumer does when he is faced not only by exhorbitant prices but also by a monopoly that promises to steadily push prices higher, is to search for substitutes. And if we do not miss our guess, the great army of workers searching for substitutes for mercury in its various avenues of consumption will do more to thwart the results of a thousand such price contests.

A Wholesalers' Association

Instead of the various branches of the drug trade coming into closer co-operation, the wholesale branch of the trade is becoming more disintegrated than ever. Within the past month the McKesson & Robbins' organization has resigned its active memberships in the National Wholesale Druggists' Association. While it is true that this company has retained its single associate membership for the manufacturing department of the company, as far as the whole business of the company is concerned, it is not interested in the affairs of the N. W. D. A.

Doubtless the reason why we now have so many divisions among the wholesale drug trade not interested in any one association can be found in the past performances of the N. W. D. A. itself. But this does not help the situation. While there is no reason for any association to attempt to set up methods of doing business in accordance with the ideas of those in control of the association, neither is there any reason why the wholesale drug trade should be divided in its association activities.

Perhaps it is also true that the co-operative mutual wholesalers have more in common with McKesson & Robbins in the way of policy than the other jobbers have. Perhaps there are points on which none of the various groups will agree. But there is ever so much that can be accomplished to better conditions in the jobbing trade that not only the jobbers themselves, but also the manufacturers and the retailers are bound to suffer from the present divided condition.

There must be one or more than one individuals in the drug trade capable of bringing the various branches of the jobbing trade together. We do not care what form this merging of interests takes, whether it constitutes the outgrowth of either or both of the existing associations, or whether it comes through the formation of a completely new organization. But it would be far better for all the distributive houses, large or small, that their branch of the drug trade be able to speak in one voice.

Ten Years Ago

From our pages December, 1919

Lehn & Fink, 120 William st., New York, are making rapid progress on the construction of their plant at Arlington, Bloomfield and Watsessing aves., Bloomfield, N. J. The works are estimated to cost about $30,000.

Alfred Joensson, Inc., 100 John st., an organization recently incorporated with a capital of $1,000,000 for the purpose of dealing in crude drugs, spices, essential oils, etc., has taken over the firm of H. J. Macbeth, Inc., of this city.

The Bayer Co., Inc., New York, has been cited by the Federal Trade Commission for alleged unfair methods of competition, in publishing advertisements that their product was the only genuine, unadulterated and safe drug product manufactured and sold as aspirin.

Col. L. G. Nutt, of the Chicago Internal Revenue office says: "*Take your choice. Register your stills or: (a) Pay a penalty of* $500; (b) pay a fine of not less than $100 nor more than $1,000; and (c) spend not less than one month or more than two years in jail."

The King Remedy Co. is suing Schieffelin & Co. for damages on an agreement to manufacture 50,000 tablets according to a formula submitted by the King company. *Schieffelin & Co. in* their answer filed by Ver Planck and Prince, explain that the King Remedy Co. was dissatisfied because calcium phosphate was used in making the tablets instead of calcium carbonate, and Schieffelin & Co. returned the money paid and took pack the tablets. *A dismissal of the action is asked.*

Newer Aspects of Price Maintenance

The fact that the large groups of wholesalers are offering to see that manufacturers' prices are maintained gives them a decided advantage over the chains in marketing their own brands. One chain store head--probably sensing this state of conditions--is now also in favor of price maintenance legislation. Where does this leave the manufacturer?

PRICE maintenance legislation has taken on an entirely new aspect as is evidenced by the statement of D. C. Keller, president of the Dow Drug Company—chain store operators—in which he declares in favor of the bill which, formerly, he strongly opposed. This means that at least one leading chain store head has come to the conclusion that more money can be made by maintaining prices on nationally advertised goods than by cutting them. The reason for an arrival at this point of view is not strange, since many in the trade could never quite understand just how price maintenance legislation would ruin the chain store business by compelling them to sell at higher prices and therefore make greater profits on all sales.

Wholesalers Leading Chains

But underlying this change of heart on the part of Mr. Keller — which might readily be the forerunner of a similar change on the part of all our leading chains—is the fact that the large wholesale organizations who are increasing their importance in the scheme of things by aiding the independent retailers to meet chain store competition, are utilizing their guarantee of price maintenance to their own benefit. This is done by the utilizing of the handsome price differential between the retail prices of the nationally-advertised goods and the lines of the wholesalers that is immediately created when nationally advertised goods are sold at list prices.

This differential of prices can be used by these wholesalers in various ways. The public itself can be attracted to the private brands by passing on the entire price differential and thus making the prices of nationally-advertised goods appear exhorbitant. The dealer can be given a margin of profit that cannot be equalled by any independent manufacturer. The main part of the price differential can be retained by the wholesaler himself who may prefer long profits on a comparatively small volume, and who may further prefer to meet the manufacturers on their own ground of advertised quality. But no matter in what manner the wholesaler chooses to utilize his increased advantage under a condition of maintained prices, he has the advantage, and he knows that he has it.

Since the independent retailers would naturally benefit by price maintenance, both through their longer profits on the nationally advertised goods, and through their increased sales of the long profit private brands of the large wholesale groups, the fact that the chain stores are leaning toward price maintenance will be welcome news to them. We may shortly see a community of interest springing up between the retail drug groups of all kinds, in which the large wholesale groups will also have a decided place.

Manufacturers Stand Alone

In this present situation the manufacturer stands decidedly alone. His existence is pitted against the field of distributing agencies. The wholesalers whom he paid in discounts to distribute his goods have used those discounts to align themselves closely with the retail trade. They have established between them that "companionate prosperity" about which much has been said. Practically all of the large distributing agencies—wholesale groups and chain stores—have become manufacturers of real significance. And the retailers can properly be considered a real and definite part of these organizations even though they are not owned outright by any group.

Price maintenance has never been a policy designed to help the manufacturer in his sale of goods, and, therefore, it has never had the full support of manufacturers as a whole. Mr. Keller is quite right when he says that some manufacturers have been secretly enjoying the conditions of cut prices that have existed. He might also have added that many manufacturers openly approve of the conditions that exist, and that also many manufacturers are most sincere in their efforts to correct the situation that has been brought about solely by the distributors themselves.

Manufacturers—whether it is realized or not—have been entirely selfish in their various views on price maintenance in the same way as the distributive branches of the trade have been entirely selfish about it. Each manufacturer has decided for himself whether or not he could make more money by following a firm price maintenance policy or by not following it. It has simply been a question of which policy would produce more business, or greater stability of business in the future. The cost of maintaining prices has been high in many instances and this has led other manufacturers to the conclusion that little real benefit is to be derived from it.

Out of Competition

The case of a manufacturer of a nationally-advertised tooth paste that sought large volume, but wanted to maintain the price weill illustrates the high cost of sincere attempts at price maintanance. This manufacturer priced his product at retail at 50 cents per tube. This meant a price to retailers of $4.00 per dozen. But with other 50-cent tooth pastes cut in price to 33 cents, this manufacturer was decidedly not competitive in the tooth paste market in large centers.

His move, therefore was to cut the retail selling price of his product to 40 cents per tube. Then with moderate price cutting his product became competitive with the others. Under these conditions he was forced to recognize sales of three tubes for one dollar as legitimate. But in order to bring the 40-cent price into being, it was also necessary to cut the price to retailers to $3.20 per dozen. The fact that this manufacturer had also priced his product decidedly under the list of competitive products, brought him a decided price advantage in the less populated districts where 50-cent tooth pastes sold for 50 cents. However, this was not wholly appreciated by the small town druggists who continued to sell the product at 50 cents per tube until the manufacturer in self defense printed the 40-cent price on the package.

Sales of this product have mounted sharply beyond question. But other manufacturers who may not make or sell as much tooth paste make just as much or more profits. This is due to the single fact that the price maintenance manufacturer is paying for his policy exactly 80 cents per gross by which he has reduced his price. And the real fact of the matter is that the cutters have cut this product still further since the price to retailers has been reduced—thus proving that the more the retailer gets, the more he gives away. This manufacturer has not solved the problem of how to maintain prices to keep the trade friendly, and at the same time get either volume or profits or both.

Retailers' Margin Now Greater

The margin of profit made by the retailer on nationally-advertised goods has been considerably widened due to the fact that practically all wholesalers have been forced to meet the precedent of the co-operative mutual wholesalers in giving to the retailer 10 per cent. of the 15 per cent. that is allowed the wholesaler by the manufacturer. So as a matter of fact, the wholesale discount of the manufacturer should be considered as five per cent. for that is what the wholesaler is retaining. And the retailer's discount should be considered as 43 per cent. rather than 33 per cent. for that is what the retailer is receiving.

Individual manufacturers had best judge for themselves whether or not the present scale of discounts is the proper one. Certainly the wholesalers, by passing on the additional 10 per cent. to the retailers have considerably dampened the enthusiasm of manufacturers to sell direct and give still greater discounts to the retailers than the retailers can obtain through the wholesalers. On the other hand, were it not for the fact that the additional discounts makes the retailer feel indebted to the wholesaler for helping him in his difficulties, the passing on of this additional discount would only thwart the wholesaler's plan to increase the sales of his own goods.

The question of price maintenance, however, is still a very debatable one from the point of view of independent manufacturers. There is little, if anything, new in Mr. Keller's statement regarding the subject. Mr. Keller treats the matter solely from the retailer's viewpoint—an angle that has been thoroughly discussed at great length for many years at the many meetings of retailers' associations. The advantages of price maintenance to manufacturers are naturally lacking in most of these pleas.

Would Shift Competition

Price maintenance would shift the burden of competition for every sale directly into the manufacturer's lap. He would be bound by contracts to permit sales of all his items at fixed prices. The distributors or chains on the other hand, would have no contracts and the price schedules on their own items would be as flexible as ever. They would be just about two jumps ahead of the manufacturers in their price movements and would cause the manufacturers untold grief. If private brands are a menace now—they would be disastrous competition under price maintenance legislation.

The manufacturer who really believes that items generally and sharply cut in price are certain to suffer in their sales volume as the various retail outlets fail to handle them or at least fail to display them, should stop to consider how much real co-operation he would obtain with maintained prices in competition with long profit, low priced goods of the wholesalers—goods which are commonly nationally advertised.

While it is true that several manufacturers are definitely committed to price maintenance and are making a real effort to live up to their promises, even to the extent of causing the head of the company to resign, it will be found that these companies are more particularly those who are selling direct to retailers and thus constantly dependent on retailers' real friendship, or else they are manufacturers who are attempting to put their goods over through mutualizing their business with that of the retailer. Either of this type of manufacturer—as opposed to the type of manufacturer who sells everybody and anybody—must cultivate and keep the real friendship of independent retailers and make these retailers believe that the manufacturer is trying to aid them to meet the chain store just as much as the wholesaler is. In such cases it is merely an attempt on the part of various factors to go one step further to convince retailers that each of these factors deserve the retailers' support.

Official Price for Medicinals

According to Commercial Attache R. C. Miller, Brussels, Belgium, the September 30 issue of the official Luxemburg "Memorial" contained the new official price list for medicines under the decree of September 13, 1929. The list sets an official price for practically every article sold in a pharmacy. The total sale price includes costs for mixing medicines, costs of the container, and costs of the actual drugs employed, and all are set forth in the utmost detail. A special fee of 5 francs is added if the proprietor of the pharmacy is disturbed between the hours of 8 and 10 p. m. Between 10 p. m. and 8 a. m. this fee is increased to 7 francs.

Druggists are required to give a rebate of 20 per cent. on orders given by the State, communes or public health bureaus or 25 per cent. if the annual total of orders by an institution exceeds 15,000 francs.

Mexico Favors U. S. Medicines

It is estimated that about 70 per cent. of the proprietary medicines and drugs sold in Mexico are imported from the United States, the remainder coming chiefly from Germany and France. A fair proportion of the perfumes and some toilet preparations are of French origin, while the United States is the chief source of supply of such articles as tooth paste, shaving soap, etc., and supplies an important share of all other goods mentioned.

Mexico is the third best market in Latin America for American medicinals, having purchased $1,322,000 worth in 1927 and $1,251,000 worth in 1928, and ranks 8th best for American toilet preparations, purchasing an average of $116,000 worth during the past two years. (Consul Lynn W. Franklin, Saltillo, Coahuila).

A. D. M. A. to Meet in Pinehurst

The nineteenth annual meeting of the American Drug Manufacturers Association will be held at the Carolina Hotel, Pinehurst, North Carolina, April 22nd to 25th, 1930, inclusive, according to an announcement by S. B. Penick, president of the association.

Arrangements for the comfort and entertainment of the membership, states Mr. Penick, have been placed in the hands of the general entertainment committee. The work of the committee embraces transportation details, golf activities, entertainment for the ladies, and all matters pertaining to the conduct of the convention outside of the business sessions.

The personnel of the general entertainment committee is as follows:

F. J. McDonough, Chairman, New York Quinine & Chemical Works, Brooklyn, N. Y.
A. D. Armstrong, Fritzsche Bros., Inc., New York.
George Simon, Heyden Chemical Corp., New York.
A. A. Wasserscheid, Mallinckrodt Chemical Works, New York.
C. C. Neal, Sharp & Dohme, Inc., Baltimore.
John D. Gillis, Monsanto Chemical Works, St. Louis.
Harold Simpkins, Mallinckrodt Chemical Works, St. Louis.
J. J. Kerrigan, Merck & Co., Inc., Ranway, N. J.
Ralph Dorland, Dow Chemical Co., New York.

Search Mercury Outlets

In an attempt to increase world consumption of quicksilver, Mercurio Europeo, the syndicate controlling the Italian and Spanish quicksilver mines, is inaugurating a contest with a first prize of £5,000 to uncover new avenues of consumption.

The announcement of the contest states that outside of exceptional war requirements, yearly consumption of mercury is very steady with only minor changes. The much-heralded newer uses of mercury such as the Emmet Mercury Vapor boiler and the mercury vapor tubes extensively used in advertising, have little more than offset the losses in mercury consumption in the color industry and the instrument manufacture industry.

It is hoped that the prize contest will inspire scientific research on the subject.

Details of the contest may be obtained direct from Mercurio Europeo, Lusabbe, Switzerland, or from their American agent's Leghorn Trading Co., New York.

Canada Produces More Drug Products

During 1928, the Canadian production of medicinal preparations totaled $17,224,351, a record figure, and nearly $1,000,000 more than last year. The principal products were prepared medicines, $7,348,058; pharmaceuticals, $5,680,599; toilet preparations, $1,564,577. Some other items of interest in the 1929 total are: Medicated wines, $90,731; disinfectants, $6,127; hydrogen peroxide, $38,022; iodine resublimed, $23,356; potassium iodide, $38,026; silver nitrate, $39,117; flavoring extracts, $77,992. One hundred and forty plants contributed to this total, of which 82 were located in Ontario and 44 in Quebec, says "Canadian Chemistry and Metallurgy," October, 1929.

Schieffelin & Co. to Make Coffee

Schieffelin & Co., New York, has leased the former factory of the Reliance Rubber Co., Keyport, N. J. and will take immediate possession. Extensions and improvements will be made in the existing building, which will be used by the company as an experimental plant for the production of coffee in powdered form for commercial marketing. New machinery to cost approximately $35,000 will be installed at an early date. William J. Schieffelin, Jr., heads the company.

An Indian boy placing the pollen in the vanilla flower

First year vanilla vines

Controversial VANILLA

WHILE vanilla beans always attract more or less attention in a market way, and while they quite often command more than ordinary attention, the situation that has now arisen in this market is being most strongly brought to the attention of the buyers of the beans by the suppliers, each of whom would present the story from his own viewpoint.

The controversy has taken place principally with relation to the lower priced and much more plentiful of the two types of vanilla beans—the Bourbons. And this market has receded sharply through the success of the bearish interests, thus widening the spread between the Mexican and Bourbon beans to an extraordinary amount—almost one dollar per pound. The reason why the bearish influences were not exerted upon, and could not be exerted upon the Mexican beans is that this crop is quite small in comparison with the Bourbon and appears to be under the very definite control of a few strong hands for this year at least.

But properly to present the picture of this controversy which has not only brought to consumers all sorts of biased reports, but which has also brought to them accusations against the Food, Drug & Insecticide Administration for alleged laxity in its release of lots of beans for import, let us start to analyze some of the reports that have been mailed to the consumers and some of the reports that have been printed in other periodicals, apparently at the instigation of the one telling the story.

A rather lengthy report of one large seller of Bourbon beans presents the problem in its opening paragraphs in which it says:

"It appears that manufacturers are being told:

"1. By one faction, that there is a scarcity of well-cured vanilla and that the new crop will be small; that it will probably not exceed 400 or 425 tons and prices will, therefore, be higher,

"2. By another faction, or at least by one other dealer that prices will be lower. That particular dealer's buying representative in Marseille is contending that the crop will be as large as 1,000 tons."

Naturally there are sellers of Bourbon beans in this country who are very heavily committed on lots of beans at higher than prevailing prices. There are others who may not be committed at all or who may be

Interior of bundling room

Exposing vanilla to the sun in the second stage of curing after removal from Cakorifico

A Tahitian vanilla nymph

committed to sales made at prices lower than those prevailing. Some of these bearish factors are understood to be offering goods at prices at which they can cover in the Marseille market, or at prices which they believe will prevail shortly due their positiveness of an actual weak condition.

Naturally the efforts of the large holders of beans to maintain the market at a level which will permit them to get out at least without a loss has taken many roads including the practice of accusing the Government of permitting sub-standard merchandise to enter the country. It is quite common for a seller of a natural product in his efforts to avoid a consumer from buying at a competitive low price to use the well-known argument of "be sure of your quality." It is also quite common practice for sellers to go further and back up this argument with the statement that there are "plenty of goods being offered that are unfit for consumption." And when it becomes necessary to strengthen this argument still further direct accusations against the activities of the Food, Drug and Insecticide Administration are often made. At first these accusations merely take the form of alleged carelessness on the part of the Administration, but sometimes they even go so far as to accuse the Administration of favoring the efforts of certain importers.

Needless to say very little, if any attention should be given to statements probably inspired by interested sources such as:

"Certain quarters complain of the laxity of the Food, Drug and Insecticide Administration in admitting some lots of vanilla now available in this market. They hint that upon arrival, these beans were obviously below the standards which the Food Law would seem to require. Actual complaints to the department have not been made, however, through fear of reprisals."

But it is also quite natural that this sort of thing might influence some timid consumers who do not know the whole story of just what the Government looks for in vanilla beans. And it is also quite natural that the story might be made stronger for those not influenced at first but who might possibly be influenced by the likelihood of lice or mould in the beans.

The Food, Drug and Insecticide Administration is not interested in the respective qualities with respect to flavor and yield of the various varieties of vanilla beans. They are interested, however, in the condition of the beans as to cleanliness and with respect to the public health. Beans containing any excess dirt, mould, lice or other insects, or material that might be substituted for vanilla beans,

Packing vanilla in tins

are immediately rejected by the Administration and ordered for re-export. The department is extremely particular in maintaining its standards and takes no cognizance of possible losses on the part of importers.

While no one definitely know that there are no mouldy or lousy beans in existence in the market in this country, the statement can safely be made that they did not arrive here from the producing countries in that condition. If such a condition exists it is because the beans have been improperly, or for too long a time stored in this country.

First Native: "What are you doing, waiting for orders ?
Second Native: "No, I'm hoping for a cyclone."

Sketched by a bearish factor

An attack has also been made upon the Administration because some of the beans are claimed to be of poor quality. It is claimed that "the inspectors will some day awake to the fact that the use of infested, mouldy re-cured vanilla beans is not exactly a healthy practice and that rigid inspection by Government officers would do much to change a situation that some importers say is very bad." But it must be realized that there is no definite means of controlling this situation any more than there is of controlling manufacturers who may have bought good beans and then let them become mouldy or infested in their plants. If the beans arrive in good condition they are passed. There is no means of refusing them admission unless the Government is to have inspectors follow every lot of vanilla beans from its production through every change of place to its consumption—an obviously impossible task.

It is interesting to note that poor quality goods are generally offered to a consumer when goods are short and rarely, if ever, are inferior products dangerous in a market that is admittedly over-supplied and falling in price. However, the reason is plain why the attacks have been made and the consumer can investigate for himself such goods as are offered him. For a consumer never has to accept goods that are not in prime condition, and the Department of Agriculture is just as particular about goods shipped in interstate commerce as they are about goods that are imported.

Thus it can be seen that the attempts of the two interests to influence the consumer to buy or not to buy, and if he does buy to buy only certain goods, has the consumer in a pretty muddle. He does not know where to turn to be sure that he is being properly advised. The only guide that he can follow is the guide of supply and demand—and in the case of vanilla beans the matter of supply is more apt to vary widely and should therefore be studied more carefully. If the statistical position is properly arrived at the consumer can judge when he is getting a bargain, and if he buys at true values or bargain prices he can forget all about market controversies and all their attending rumors.

To properly arrive at the statistical position let us study the imports as reported by the Bureau of Foreign and Domestic Commerce:

Vanilla Imports in Pounds

	Mexican	*Bourbon*	*Total*
1918	100,559	658,842	759,401
1919	424,631	725,448	1,150,079
1920	274,221	965,490	1,239,711
1921	248,227	736,146	984,373
1922	105,171	1,129,371	1,235,542
1923	229,335	711,177	940,512
1924	157,332	651,803	809,135
1925	231,262	714,310	955,572
1926	222,488	929,239	1,151,727
1927	238,437	754,582	993,019
1928	245,812	1,202,708	1,448,520
1929 9 mos.			1,059,803

From these figures it will be seen that 1928 imports were by far greater than any of the ten years that preceded it. It can also be seen that 1929 is running close to 1928 in quantity of imports. As a further means of comparing 1929 with 1928 it is well to compare imports for the nine months of 1929, 1,059,803 pounds, with 1,194,783 pounds imported during the first nine months of 1928. This plainly indicates that 1929 is running very close to 1928, and the actual fact of the matter is that imports in 1929 will exceed those of 1928, thus making 1929 the year of the heaviest imports in at least a decade.

Imports during October and December are understood to have been very heavy, and the closest check gives an estimate of imports up to December 1 of 1,436,200 pounds, clearly indicating the fact that there is this year more vanilla available than in any of the previous record years.

If we start with 1919 and disregard the abnormally low years of 1918 and 1924, we strike an average of the

(Continued on page 583)

Can Multiple Seizures be Had Without Multiple Suits?

By H. C. Hallam

FOLLOWING the statement of Walter G. Campbell, Director of Regulatory Work, in the U. S. Department of Agriculture, defending the practice of making multiple seizures of food and drugs, the question has been raised in drug trade circles that if it be conceded that multiple seizures might be deemed necessary for the protection of the public in certain cases, why should it be necessary to institute multiple suits against food and drug manufacturers in various parts of the country.

While the Food, Drug and Insecticide Administration's duty to remove effectively from the market what it believes to be a fraudulent product is fully satisfied by the Multiple Seizures, is it part of the Administration's duty to accompany the seizures by Multiple Suits?

The reaction to this suggestion noted in trade and in official quarters varies considerably. Some drug trade representatives let it be known that they would welcome a policy on the part of the government where if multiple seizures were deemed desirable by officials of the Department of Agriculture, the manufacturers whose products are concerned would not be required to defend suits brought against him by the government in various parts of the United States. However, the practicability of such a plan is doubted by some.

From a legal standpoint, strictly speaking, seizures, whether single or multiple, are brought about by action in court in the form of libel proceedings. In other words, government and trade lawyers say, there cannot be a seizure without a suit. The food and drug law provides that seizure of misbranded or adulterated goods shall be obtained by proceedings as nearly as possible like proceedings in admiralty. Instead of a ship being libeled as in admiralty, however, the libel proceeding under the food and drug law are directed against food or drugs involved. Thus we have cases bearing titles like United States against Twelves Cans of Tomatoes, or United States against Ten Boxes of Pills. The libel means that the government seizes the goods, but the seizure is not confirmed, it is understood, unless and until the court decides the case in favor of the government. If such decision is not obtained the manufacturer may regain possession of his goods, if he contests the libel.

Officials of the Department of Agriculture contend that, in effect, there are not multiple suits now being brought against drug manufacturers. Even in the cases of multiple seizures, they say, there is, practically speaking, only one lawsuit against the manufacturer in question. Literally, speaking, they admit that this is not exactly accurate, but Dr. J. J. Durrett, chief of Drug Control, says he does not recall but one instance where there was more than one lawsuit tried out against a manufacturer whose product was seized. This was a case some years ago involving a concern in the Southwest whose drug product was seized, but who is alleged to have kept on shipping his goods in various ways after the government had won one or more libel proceedings against his product.

There is also the case of the National Remedy Co., whose product, B. & M. External Remedy, has been seized in some 15 or 16 federal court jurisdictions during a recent period, which followed another seizure in New Hampshire a number of years ago. This latter case was tried before a jury in the federal court in that state and the company won out in its contention that its product was not misbranded.

The point made by Dr. Durrett is that in nearly every instance where multiple seizures are involved only one lawsuit is tried out in court. Admitting that a number of libel proceedings may be instituted against one manufacturer, involving the same prod-

uct, Dr. Durrett says that the government is satisfied if it wins one such proceeding. In the event of such a victory by the government, he says, the manufacturer usually does not contest libel proceedings in other jurisdictions involving the same product. In such other cases, the record shows, the courts in the other jurisdictions render judgment in favor of the government and in support of its seizures. Such judgments are obtained through default of the manufacturer, who elects not to contest the seizures, and notices of judgment are issued by the Department.

Dr. Durrett contends that under such circumstances there is really only one lawsuit tried. But, on the other hand, trade representatives point out that there is more than one suit brought by the government; in other words, there are multiple suits, as well as multiple seizures; and that there would be a multiplicity of suits tried out in court but for the fact that the manufacturer decides to stop fighting in the face of the enormous power of the federal government operating under a criminal statute. So, they say, there is not much substance to the official point. The same principle could be carried out, they say, if the manufacturer did not contest any seizure or any suit, in which event, it is said, the department could declare that there had been no lawsuits, or no trials of lawsuits, involving seizures of food and drugs. The reason being that the manufacturer submits and conceded the seizure and agrees to stop the alleged misbranding charged against him.

Department Will Not Agree

Such cases as the National Remedy Co. come in a different class from ordinary multiple seizures or multiple suits, in the opinion of drug control officials. They declare that because the company beat the government in one case several years ago that fact does not debar the government from attacking the company's product again at this time, especially when there has been a change of label on the product, as the department contends.

What is involved in the trade suggestion that while multiple seizures might be deemed necessary in some instances there should not be multiple suits, as the suggestion is understood here, is that if there were multiple seizures of a company's product, not more than one of them should be pressed in court proceedings, in the event that the government lost that one case. This plan would be likened somewhat to the proposition of the National Remedy Co. that not more than one of the cases involving seizure of its product should be tried out in court. That is exactly what the department declines to bind itself formally to do, although the company did succeed in obtaining a temporary agreement with the department not to try more than one case at a time on its merits, pending final determination of the appeal taken from Gordon's decision against the company, in the District of Columbia Supreme Court, handed down last Summer. This one case is to be tried before the federal court in Baltimore. But it is not understood that the government agrees not to make further seizures of the company's product or not to push to trial later on, present seizures, if it should lose out in the Baltimore case. The only thing that would tie the government's hands in this connection, it is believed, would be a decision by the United States Supreme Court in support of the company's claim for an injunction to stop multiple seizures of its product. And the same policy would apply to any other company, it is believed.

Government Asks Justice

When Dr. Durrett was asked if the government would agree to only one suit and one seizure in any instance he replied, with a quizzical smile: "Did you ever hear of a miscarriage of justice ? Well, we have such things occasionally." Which was taken to mean that, if the government should happen to lose one suit against a concern involving a product obnoxious to the department, it would take the view that the government had not obtained justice, and it would seek what it considered justice through another court by trying another case against the same company. This attitude on the part of the department people is understood to be one that actuates them in pursuing certain multiple seizure cases, namely, that the results, of trial of first cases did not represent justice to the government.

In the above discussion of multiple seizures and multiple suits, reference is not had to criminal prosecutions under the food and drug law. Such prosecutions are entirely separate and apart from civil proceedings involving the seizure of goods.

The Campbell Statement

During recent weeks there has been a good deal of discussion about the statement of Walter G. Campbell in defense of multiple seizures. According to drug trade people, that statement did not tell the whole story. They call attention that Mr. Campbell's statement enumerated only cases in which there had been seizures of drug products in four or more jurisdictions. They say that the statement would have been more complete if it had referred also to instances where there had been two or three seizures of the same product. Such latter seizures really constitute multiple seizures, it is asserted.

Another point made by drug trade people is that it might be inferred from the Campbell statement that the products he enumerated were taken off the market, whereas it is declared that in reality a number of them are on the market under other names or labels.

Thirdly, trade representatives say, the Campbell statement does not take into account the many instances where manufacturers changed their products or their labels or literature under threat, implied if not expressed, that multiple seizures would be made of their goods.

While there is a great deal of protest against multiple seizures, doubt is expressed in the drug trade that a great fight will be made on the part of the trade against this policy of the department, or that there will be legislation enacted this winter against multiple seizures.

Competent legal authority recognizes that the law imposes a mandate upon the department to seize adulterated or misbranded food and drugs. In a measure, is it said, the department has exercised its discretion in carrying out this mandate. But the trade contention is that this discretion should be exercised in a way that the trade deems more reasonable.

Reorganization Likely

Partial reorganization of food and drug law enforcement by the government appears to be contemplated under the provisions of the federal Budget for the fiscal year beginning July 1, next. As submitted to Congress at the beginning of its long winter session, the budget proposes to change the name of the Food, Drug and Insecticide Administration to "Food and Drug Administration." In this connection the Budget says: "It has been found that the present name is long and cumbersome, and very often causes confusion, because of its length, in correspondence between this Department and outside agencies. Furthermore, it is believed that the word 'drug,' in a broad sense, covers insecticides, and that the word 'insecticide' is therefore superfluous."

This change is understood to have been recommended by the conference of food and drug officials held at Lincoln, Nebraska, last September.

Increased Budget

The Budget calls for a total of $1,596,000 to be appropriated for food and drug administration for the fiscal year, 1931, as compared to $1,537,000 appropriated for the current fiscal year, or an increase of $58,700. Dr. Paul Dunbar, chief of the present Food, Drug and Insecticide Administration, says that the budget allowed some $75,000 more money for enforcement of food and drug laws than was recommended last year. There appears to be some reapportionment of funds within the administration contemplated.

There is no present indication that there will be any radical change in personnel in connection with the new organization. Dr. Durrett, back on the job after a few months furlough on his farm in Alabama, appears to be more full of vim and vigor than ever before. He says frankly that he has not felt better since he played football as a boy. When asked about his plans, he said that he would be on the job for a while, but would not say how long. Dr. Dunbar says that Dr. Durrett did not contract to serve the government for the rest of his life, but that he hopes the genial doctor will stay on the job as long as he can.

Rumors that drug control work may be transferred to the Department of Commerce are not confirmed. President Hoover has been reported as favoring such a transfer, but his spokesmen say they don't know of such a plan. However, it is believed that such a change would be possible if the President's recommendation to Congress were carried out, namely, that he be given power to reorganize the government service by rearranging its various divisions, bureaus and functions.

The Department of Agriculture has announced the appointment of Dr. Fred W. Norris of San Angelo, Texas, as medical officer in special collaborative investigations, where he will assist in the preparation of cases involving alleged drugs under the fraud order law enforced by the Postoffice Department. He succeeded Dr. L. F. Kebler and other collaborators.

The department also announced appointment of Dr. Frederick J. Cullen, a graduate in medicine and a registered pharmacist, with University of Colorado, Northern Pacific Railroad and Army background, as associate medical officer in drug control.

The Department has been looking for a trained physician and pharmacologist to assist in drug control work, but has been unable to obtain the services of such a man despite announcement by the U. S. Civil Service Commission of an examination for such a vacancy. It is said that there are not more than 20 or 30 men in the United States who could meet the department's qualifications, and all of those men so far located appear not to be attracted by the government salary.

German Pharmaceutical Production

A recent issue of Chemisch-Technische Zeitschrift" estimates the value of Germany's annual production of pharmaceutical specialties at 300,000,000 marks, with a retail sales value of something over twice that figure, or 630,000,000 marks, or 10 marks per capita of population. Almost one-half of this production is credited to the German dye trust and six other larger pharmaceutical producers, while the balance is produced by the so-called medium and small enterprises. This authority accepts at 80,000,000 marks the value of German dye trust production of pharmaceuticals gives at 8,000,000 marks each the average value of output by the six next largest German producers, or a total of roughly 130,000,000 marks. The medium and small producers, the estimate claims, turn out products, valued at another 180,000,000 marks, or a grand total of 310,000,000 marks.

This figure is then placed at 10 per cent. of the total chemical production value by the German chemical industry of three billion marks, reported to the economic conference of the League of Nations in 1927. As this figure was credited to 1924 production in Germany, it may be accepted that Germany's total chemical production is now nearer four billion marks.

Mexican customs officials are withholding shipments of pharmaceutical and toilet preparations in the following cases: Articles refused registration; when application for registration has not been made; when labels and literature are not in accordance with regulations, according to a cable from Commercial Attache George Wythe, Mexico City.

Cinchona Cultivation in India

In a recent issue of the "Bulletin of the Imperial Institute" (Vol. XXVII, No. 1, 1929) is published a memorandum on cinchona cultivation in India and its future development, prepared by Dr. J. M. Cowan, M.A., D.Sc., officiating director, Botanical Survey of India. This originally appeared in the "Minutes of Evidence of the Royal Commission on Agriculture in India "(Vol. I, Part III, 1-12). Dr. Cowan states that the cultivation of cinchona was introduced into India in 1860, and has since been continuously controlled by the Government of India. A Government plantation was started at Dodabetta, near Ootacamund, in 1862, and soon after another, also in the Nilgiris, at Naduvattam, while the Bengal plantations date from 1864. At about the same time private planters began to grow cinchona with such profitable results that there was an indiscriminate rush to plant, followed, between 1880 and 1890, by a flooded market and falling prices, whereupon the planters abandoned cinchona and turned their attention to tea growing, which was found to be more profitable. The fact that *Cinchona officinalis* and C. *Succirubra*, the species grown in the early plantations, yield a comparatively low percentage of quinine, also contributed to the failure of private enterprise. Private cinchona growing has never revived, the practically the only plantations to survive were about 4,000 acres managed by the Government.

In 1917 a survey was conducted in order to discover areas possessing the necessary conditions for cinchona growing. Special soil and climatic conditions are essential for the rapid growth of C. *Ledgeriana*, which has been grown in Bengal since 1870, as it yields a higher percentage of quinine than the varieties first introduced. Extremes of temperature must be avoided. The ideal temperature is about 75° F., with a yearly mean maximum of about 85° F. and a minimum of 60° F. The rainfall limits are roughly from 75-180 inch per annum, but the most desirable rainfall depends on the nature of the soil. In the case of a heavy soil a high rainfall is very unfavorable, but on a well-drained, porous soil 200-inch would not be excessive. Cinchona must be planted between the altitude limits of 1,000 and 5,000 feet, and the best results are obtained on moderately steep slopes, where the soil is rich, porous, well-drained and loamy. In India such a soil at the necessary altitude can only be found over volcanic or granite rock formations. The accessibility of the region, the means of transport available, and the labor conditions are, of course, of fundamental importance.

When all these factors are taken into consideration the largest suitable area in South India is the Coimbatore district on the Anamalai Hills at an elevation of from 3,000 to 4,000 feet. The Government of Madras commenced planting in 1925, and some 250 acres have already been planted, mostly with a hybrid of C. *officinalis* and C. *Ledgeriana*, but in the future it is intended to grow a considerable proportion of C. *Ledgeriana*. Cinchona growing in this district, in which it is estimated that about 10,000 acres could be planted, is considered to be very promising and likely to be a financial success. Other suitable districts in South India are either too remote or already under tea.

In Burma, Tavoy was first considered the best locality, and accordingly planting was started there in 1920, but as the climate was found to be unsuitable the plantation was abandoned. Growing has also been tried at Mergui, but has not yet proved a success. Mogok has been recommended as a suitable area, but it is considered that preliminary experiments would be necessary before beginning operations on a large scale.

In Assam, an area in the Mikir Hills has been stated to be one of the three most suitable localities in India. It comprises 20,000 acres of satisfactory land at an average elevation of 1,500 feet, and would probably repay exploration and experimental planting.

Undoubtedly the most suitable regions in India for the production of C. *Ledgeriana* are in the Darjeeling district of Bengal. Two Government plantations are situated there, Mungpoo, with about 3,000 acres of suitable land, of which 1,000 acres are bearing cinchona, and Munsong, with about 2,000 acres fully stocked. It has further been proposed that an area of 4,000 acres at East Nar, in the Kalimpong subdivision, should be tried experimentally. The greater part of the suitable land in the Darjeeling district has for many years been planted with tea.

It is, therefore, concluded that the areas which offer hopeful prospects for the extension of cinchona growing are: (1) the Anamalais (10,000 acres), where work has already begun; (2) East Nar in Bengal (4,000 acres); (3) the Mikir Hills in Assam (30,000 acres); and (4) Mogok in Burma (10,000 acres), making a total of 44,000 acres. The experimental planting of 50-100 acre plots in these districts is suggested. There is a fifth area, viz., the Nanmyin Valley in Burma, which is considered worthy of exploration and experiment.

The need for research in order to increase the production of existing plantations is emphasized. Progress in this direction may be effected by improving the tree so as to increase the percentage of quinine in the bark, by shortening the rotation, and by the preparation of definite planting and harvesting schemes for the plantations. Further exploration for suitable land is also needed.

W. T. Rawleigh, of Freeport, Ill., was a witness of Senator Robinson's to be called in the Senate Lobby Investigation. Mr. Rawleigh is said to have financed three University of Wisconsin professors in study and a report justifying low duties on foreign sugar, and who has financed the Rawleigh tariff bureau in Washington during the pending tariff measure.

Competitive Advertising in Milk of Magnesia

The *oldest manufacturer* tells "Why *liquid magnesia* is best" in an attempt either to answer competition from the tablet form of product, or to induce the public to read about Milk of Magnesia.

THE Milk of Magnesia market is obviously very competitive as anyone will realize from a study of the long list of manufacturers of the product in this country. However, a study of the conditions in that market will immediately reveal that the oldest product in the market has a consumer demand that is difficult for even the most aggressive merchandisers to overcome. Naturally for a long time past, this original manufacturer—The Charles H. Phillips Chemical Company—has advertised that its product was prescribed by physicians, and that it has been "standard for more than fifty years." There was no need to direct the advertising copy to overcome the claims of any competitors as there were no outstanding claims. Milk of Magnesia was Milk of Magnesia. There might be a question of fineness of quality, more smoothness of emulsion, or similar claims, but these were the things that advertisers commonly talked of, or at least inferred.

Now!
Milk of Magnesia Wafers
for Sour Acid Stomach

Instantly neutralize acid, stop indigestion, heartburn, headache, with a pleasant-tasting wafer

Everybody knows how milk of magnesia quickly neutralizes stomach acidity. It never fails *to give instant relief. It is so* mild that doctors prescribe it for infants. But millions object to its unpleasant "earthy" taste.

Now science has found a way to give you true milk of magnesia in pleasant wafer form. A tasty tablet that you chew anytime, anywhere. These tablets are called Milnesia Wafers. *Delicately flavored with wintergreen*, they are as easy to take as a candy lozenge.

Many physicians prescribe *Milnesia Wafers in place of old-style* liquid magnesia. Undiluted with water, Milnesia Wafers form a protective alkaline film that instantly neutralizes excess *stomach acid. That's why they* are most effective when used for unpleasant breath, sour stomach, sick headache, indigestion, *biliousness* and constipation.

Milnesia Wafers are so pleasant, so amazingly effective that they have taken the place of unscientific stomach remedies, soda, indigestion powders and *dyspepsia tablets*, in thousands of homes.

All druggists carry Milnesia Wafers at 60c a package and *the handy vest pocket package* at 20c.

MILNESIA WAFERS (MILK OF MAGNESIA WAFERS)

Why liquid magnesia is best

Any doctor can tell you why Phillips Milk of Magnesia (a liquid) is the ideal anti-acid for sour stomach, gas or other gastric disorder. A liquid is kind to an upset stomach. Solids often irritate its over-sensitive condition.

Dry magnesia will not dissolve in water. When compressed into tablets or wafers, magnesia becomes still more insoluble, with danger of passing through the stomach and bowels as irritating grit.

Phillips Milk of Magnesia is a liquid—the only form in which true Milk of Magnesia can be made. It is immediately active. It has a strong affinity for acids; each molecule of liquid magnesia neutralizes a molecule of acid. And liquid magnesia does not accumulate in the bowels.

No harmful effects can follow its prolonged use. It is the safest and most dependable form of magnesia for infants and children. It is the appropriate laxative anti-acid for adding to milk mixtures *intended for bottle fed babies.*

The bland laxative action of Phillips Milk of Magnesia is due in large part to its liquid colloidal state, which causes softer evacuations than would otherwise occur.

PHILLIPS Milk of Magnesia

STANDARD FOR MORE THAN FIFTY YEARS

But within recent times there has come a new competitor in this field who talked about something entirely different. This manufacturer was Milnesia Laboratories which produced "Milk of Magnesia Wafers." This company talked of the advantages of taking Milk of Magnesia in tablet form. These advantages—which were almost obvious—were a more pleasant taste, cleaner, ability to carry in the pocket, etc. With this type of publicity work going on for a year or more, there has been no suggestion from anywhere that both liquid and the tablet were not exactly the same as far as the consumer concerned.

Now the oldest and original manufacturer of Milk of Magnesia has taken up competitive advertising directed against the tablet type of product. Under the caption, "Why liquid magnesia is best," they proceed to point out their idea of the disadvantages of

using anything but the liquid which they claim is "the only form in which true Milk of Magnesia can be made." This manufacturer suggests that dry magnesia will not dissolve in water, and when compressed into tablets or wafers, magnesia becomes still more insoluble with danger of passing through the stomach and bowels as irritating grit.

So far there has been no answer by the manufacturer of the tablet form of product, nor has there been any other manufacturer of the liquid who has followed the lead of the Phillips company. But there might readily develop a real situation of competitive advertising in this one commonly used drug product. While it is to be assumed that the tablet form of product has been making quite some headway, inasmuch as the dominating maker in the field has deigned to mention the subject, the reason for the introduction of this type of copy might merely be an attempt to attract attention and induce the public to read about Milk of Magnesia which is ordinarily an old story.

No matter how far the matter goes, it is quite apt to stir up the public interest and knowledge of Milk of Magnesia, and the only outcome of such a condition must be more consumers of this product both in the liquid and tablet form.

Alcohol Control Transfer

One of the high spots in President Hoover's message was his recommendation for prohibition reorganization. He proposes that the "federal functions of detection and to a considerable extent of prosecution" should be transferred from the Prohibition Bureau, under the Treasury Department, to the Department of Justice, and that at the same time "the control of the distribution of industrial alcohol and legalized beverages should remain in the Treasury." Two of his other recommendations concern the codification of laws relating to prohibition and the relief of congestion in the federal courts. Fourthly, he suggests reorganization of the various services engaged in preventing smuggling, into one border patrol under the Coast Guard.

These recommendations are understood to be based on the investigations of Mr. McNab who was named by the President some months ago to consider problems of prohibition reorganization. They were being worked up into a bill or bills for introduction in Congress.

The final attitude of the drug trades will depend upon the exact provisions of this legislation, it is understood. While the trades have unanimously opposed the President's original recommendation, in his inaugural address of last March, that prohibition enforcement to transferred from the Treasury to the Justice department, some trade representatives are inclined to think that, if there is to be any change at all, the latest suggestions of the President appear to be reasonable. That is, if it is contemplated that the police work of investigating and of catching bootleggers shall be transferred to the Department of Justice and the permissive work under the prohibition law be retained under the Treasury.

If, however, in transferring the forces of "detection," it is proposed to place under the Department of Justice the special agents who investigate the antecedents of an applicant for an alcohol permit, and who keep tab on the permittees operating under industrial alcohol permits, and look into their processes and plans, that would not be so good, in trade opinion. If anything of that kind is attempted, it is believed that the trade will fight the latest prohibition reorganization proposal.

The same situation would be true if transfer of the forces of detection and of prosecution would be so extensive as to reduce the Prohibition Bureau to a minor position and deprive it of most of its functions except those a of a mere expert chemical character.

The trade wants Dr. J. M. Doran, Prohibition commissioner, to remain a major factor in prohibition administration and it wants to continue to do business with him.

A bill to establish a border patrol has been introduced by Representative Hudson of Michigan, one of the prohibition leaders of Congress.

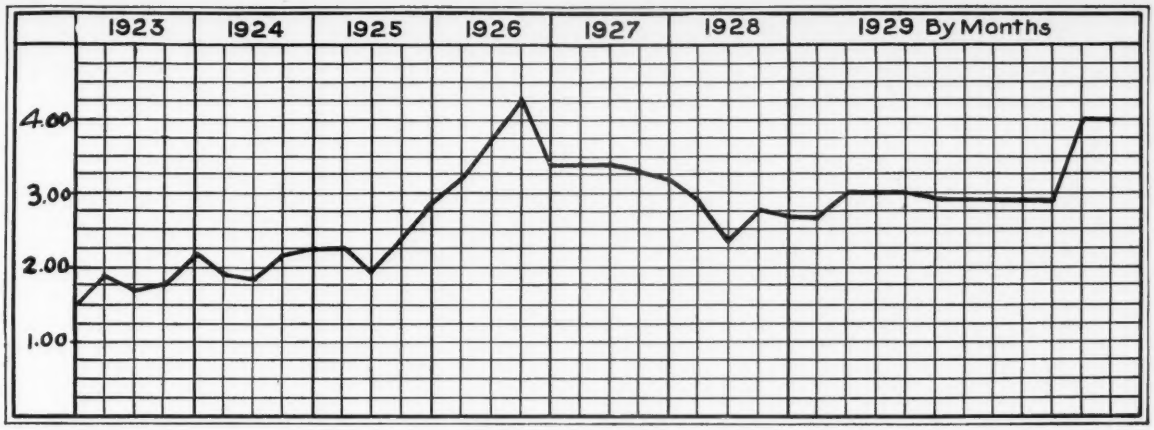
Another bill of interest has been introduced by Representative Tinkham of Massachusetts, which proposes to empower the Federal Trade Commission with authority to pass upon mergers proposed in the industrial world. This bill is reported to be based on the fact that Attorney General Mitchell has announced recently in effect that the Department of Justice will not approve any more mergers or combinations. It is regarded by some drug trade people as a good measure.

The Federal Trade Commission has instituted proceedings in some instances against alleged mergers or combinations in lines related to the drug trade on the ground that such proposals would tend to reduce or eliminate competition. But business men in many lines have long recognized the need for some tribunal before which they could go and submit their plans and projects, with a view to obtaining a verdict upon which they can proceed, if within the law, or be told that such plans or projects are illegal.

Bomar With Stearns

Frederick Stearns & Co. has appointed William E. Bomar as Astring-o-sol promotion manager. He goes to the Stearns institution after eight years of continuous service with The Western Co., famed for Dr. West and Gainsborough products.

Mr. Bomar entered the drug business in 1921 with the Western organization and is already familiar with Astring-o-sol and well acquainted with many members of the Stearns organization. His appointment as Astring-o-sol promotion manager is part of a broad plan of sales development and advertising that the Stearns institution has under way for this product.



Prices of Ipecac, Cartagena: Dollars per Pound

When Will IPECAC Prices Recede?

WHILE the spot market has been practically devoid of supplies of ipecac root, with virtually no arrivals of consequence during November, the indications this month were that enough material was on the way to this country readily to relieve any spot shortage that might exist. Thus to a considerable extent the apprehension of consumers as to the possibility of a rapidly climbing market for ipecac will be relieved, even though consumption during the year just past was very heavy as a result of influenza epidemic, and even though the goods of the last crop had all passed into the hands of consumers. The fact is: Large consumers are well supplied.

IMPORTS OF IPECAC ROOT

	Pounds	*Value*
1922	54,589	$ 65,097
1923	62,935	81,413
1924	76,627	110,249
1925	61,631	97,967
1926	72,247	201,478
1927	87,898	253,606
1928	59,357	147,260
1929 8 mos.	42,486	106,649

The two grades of ipecac—Rio and Cartagena—come from this hemisphere. The Rio comes from Brazil and the Cartagena from Columbia. Both are collected in exactly the same manner and at the same time of the year. The roots are collected on the banks of the rivers in these countries after the rivers have subsided. In other words, the root is under water in the wet season and out of water in the dry season. The collectors wade through the mud of the river banks in hip boots at such times as they can. The collection season normally starts in November and ends early in March. If, however, the Spring is not wet, gathering can be carried on later than the start of Spring if greater supplies are needed.

The amount of ipecac available in any one year, therefore, is generally fixed with the approach of Spring. It is not possible to increase the supplies available for the year after such times as the river has filled its bed and the banks are covered. If a normal supply of ipecac is to be a certainty for any one year, this normal quantity must be collected during the months when it is definitely known that the river banks will be exposed.

Shipments of root into this country extend throughout the entire year with goods arriving each month. The first three months of the year, however, are the time when the great bulk of supplies are received here. During this short period close to half of the entire shipments from the primary markets arrive. From this time on to the start of the next collection season,

the arrivals represent material that has been held in the primary market countries due to the fact that it did not immediately find its way into export channels. A great deal of this material is gathered in small lots by those not directly connected with the main ipecac trade and it must be brought together before properly sized export shipments can be made.

The fact that the primary markets were absolutely devoid of carry-over supplies at the opening of the present collection season means that the material now being collected would find its way almost immediately into consumers' hands, were it not that the absence of carry-over is due to heavy stocking on the part of large consumers a few months back. It also means the high prices now prevailing, together with the fact that there will be an immediate demand for the goods produced, should spur on the exporters in the producing countries to see that more ipecac root is produced quickly. Further, there is the fact that there must be produced during this season a year's normal requirements plus a fair-sized carry-over if consumption remains at normal levels as is generally anticipated.

The quantities of ipecac shipped into this country, while fluctuating each year, have shown no definite trend toward increased or decreased consumption. It is also difficult to judge the actual consumption of ipecac root in this country from a study of the import figures as this country ships considerable quantities of the Cartagena root to Europe. If the import figures do reveal anything, however, they reveal that imports into this country during 1928 were well below the totals for the two previous years. This might readily account for the rapidity with which the 1929 goods have all come to this country and passed into consumers' hands. But the fact that there have been two years of small offerings in succession makes the possibility of any marked price recessions over a long period rather remote.

The amount of the total ipecac that is shipped to the United States is less than that shipped to the other important nations of the world as is indicated by the following report recently reported by Consul General Claude I. Dawson, Rio de Janeiro:

While the United States takes a fair quantity of the Brazilian exports of ipecac root, larger shipments are made to Germany, Great Britain, Uruguay and France, as may be seen from the official export statistics for 1926 and 1927:

	1926		1927	
	Kilos	*Milreis*	*Kilos*	*Milreis*
Germany	13,879	395,193	24,393	827,749
Great Britain...	16,656	438,598	14,508	564,378
Uruguay.....	18,336	442,440	14,091	453,161
France.....	11,458	296,805	9,388	393,975
United States...	7,913	284,650	7,662	274,793

(Average values of the milreis during the years 1926 and 1927 were $0.1444 and $0.1184 United States currency).

"Exports of ipecac root, or ipecacuanha, from Brazil during 1924, 1925, 1926, 1927, and 1928 were as follows: 92,000, 60,000, 68,000, 70,000 and 59,000 kilos, valued at $228,000, $186,000, $265,000, $297,000 and $203,000, respectively.

"The heaviest exports of ipecac root are from Corumba in the State of Matto Grosso and from Bahia and were as follows: Corumba—43,496 kilos, value 1,055,595 milreis in 1926 and 31,144 kilos, value 1,096,964 milreis in 1927; Bahia—13,146 kilos, value 464,236 milreis in 1926 and 23,365 kilos, value 912,648 milreis in 1927. Smaller quantities came from Rio de Janeiro, Santos, Manaos and Pernambuco."

When it is considered that in addition to the large amounts of Rio ipecac taken by European countries, the large majority of the Cartagena root that comes into the United States is in turn exported to these countries, there is had a realization of the greater interest taken in this item in the Old World.

Greece Restricts American Medicines

American manufacturers and Greek importers are experiencing considerable difficulties in marketing American prepared medicines in Greece, owing to the severe provisions of the decree of March 31, 1914, whereby a license is required for the free sale of all pharmaceutical preparations and of some toilet preparations, according to Commercial Attache Frederick B. Lyons, Athens.

The difficulties experienced by those interested in the sale of American prepared medicines are due to the fact that a certificate of the type required by the Decree of 1914 can not be obtained in the United States. The decree of March 31, 1914, had not before been strictly enforced, and most of the prepared medicines heretofore imported by Greece circulated without a license from the Greek Medical Council. Recently, however, the Greek Ministry of Hygiene decided to strictly enforce the provisions of the decree of 1914, and the first material step was taken in Salonica, where the Governor General of Macedonia ruled that on and after October 1, 1929, the circulation of all chemical and pharmaceutical products manufactured by firms not officially recognized by the Medical Council would be prohibited.

The Governor's ruling caused considerable anxiety among the Greek commission agents representing foreign manufacturers of prepared medicines and its enforcement would mean a sudden suspension of their sales. They called on the Minister of Hygiene, who informed them that the Government, in view of the fact that most of the preparations sold in Greece are illicitly circulating, had decided to strictly enforce the provisions of the Decree of 1914 throughout the entire country.

A member of the Bureau's Athens office in an informal conversation with the Director of Hygiene discussed the question of certificates required by the Greek law. The director stated that in the absence of a medical council or academy, or of a similar body in the United States, the Greek Government might accept a certificate issued by an official chemical institution which should also mention the ingredients of the article's composition. If such certificate is not produced, the manufacturers or their agents would have to pay 3,000 drachmas for each preparation in order to obtain the necessary license. (Drachma equals about $0.0129 United States currency).

Australia Market Growing for Biologics

Australia ranked as the ninth best market for American serums, antitoxins, and viruses in 1928, taking $57,000 worth against $35,000 worth in 1927.

England Allows Free Sale of Proprietaries

Conditions that hark back to the times before the passage of the Food and Drugs Act in this country still exist in England. A recent report on the situation has brought considerable criticism of existing conditions.

By H. H. Bagnall

City Analyst, City of Salford, England

IT MAY not be generally known that in England there is practically no check at all on the sale of proprietary medicines. It is open to anyone with enough capital to make up a mixture of drugs (except scheduled poisons) and advertise it as "A's Powders" or "B's Pills," and so on, with accompanying statements to the effect that it will cure or relieve certain diseases, whether the drugs employed are actually useful for the purpose or not. If the name of an ailment is mentioned with the medicine, Government stamp duty has to be paid, but if only the organ of the body which is the seat of the ailment is mentioned, no duty is payable.

Head or Headache?

For example, "Cough mixture" is dutiable, "Chest mixture" is not; "Headache powder" is dutiable, "Head powder" is not. Subject to this one restriction, proprietary medicines of any description, whether harmful or harmless, whether suitable or not suitable for the diseases they are advertised as being able to cure, may be made and sold with impunity. Nitric acid and water may be sold and has been sold as a cure for corpulency, starch as a remedy for dropsy, insanity, smallpox, etc., and sugar as a cure for drunkenness. A remedy may be recommended by bogus testimonials and by the invented opinions and facsimile signatures of fictitious medical men. It can be sold under any name the "inventor" may choose, and at any price the public can be persuaded to buy. The credulity of the latter seems to be boundless. Any advertisement of a new patent medicine, however absurd its claims, seems to be accepted as truth by large numbers of people.

Proprietary medicines, for practical purposes, may be divided into four classes, always excluding a certain number such as aspirin, acetanilide, which are genuine drugs synthetically produced and sold (under many names) by pharmacological laboratories. 1. This group consists of a number of household remedies, often originally manufactured from a family doctor's prescription, and often beneficial for simple ailments. The retail price is generally out of all proportion to their cost, and large fortunes have often been made by the proprietors. 2. Dangerous remedies and drugs for improper purposes, which should not be sold at all except under a doctor's prescription. 3. Fraudulent remedies—a large class with an extensive sale, often at exorbitant prices, consisting of alleged cures for diseases such as cancer, consumption, diabetes, epilepsy, etc. These are sheer and cruel frauds, and their makers deserve the severest penalties. 4. Remedies making grossly exaggerated claims upon which they depend for their sale. Huge profits are made by the makers of the articles in this class.

It will be seen that very little good can be said for the articles in any of these classes, and the suppression of the whole would probably immensely benefit the health of the community.

The Existing Law

The point that needs stressing is that the sale of such articles cannot be prevented under existing law, and the prosecution for the sale of the cod liver oil tablets is probably the first of its kind, taken under the Sale of Food and Drugs Acts, which has succeeded. Certain special circumstances were, however, operative in this case. (This reference is to a case in which a summons was issued against a firm for the sale of "Cod Liver Oil" extract tablets which were found on biological investigation to be entirely lacking in vitamins A. and D, the most important constitu-

ents of cod liver oil. The summons was issued under Section 6 of the Food and Drugs Acts, for selling to the prejudice of the purchaser, cod liver oil tablets which were not of the nature, substance and quality demanded. The defendants were fined £30 and 75 guineas costs.)

Under Section 6, sub-section 2, of the Sale of Food and Drugs Acts, 1875, and Section 2 of the Food and Drugs (Adulteration) Act, 1928, proprietary medicines are specifically exempted from the provisions of the Act. The wording of this Section is as follows: "No person shall sell to the prejudice of the purchaser any article of food, or any drug which is not of the nature, or not of the substance, or not of the quality of the article demanded by such purchaser, provided that an offence shall not be deemed to be committed where the drug . . . is a proprietary medicine or subject of a patent in force." The reason for this exemption is unknown, but may be guessed at.

In the case of the cod liver oil tablets, the proprietary name was "——'s Cod Liver Extract Tablets," and had the article been asked for under that name there would have been no case since the purchaser would have got precisely what he demanded. But actually cod liver oil tablets, which is not a proprietary article, were asked for and the proprietary article was supplied. These tablets proved not to be of the nature, substance and quality of cod liver oil tablets, and, in the writer's opinion, the vendors were rightly convicted, although the question of whether the sub-section was still operative in this case was not raised by the defendants.

The special circumstances of this case, however, render it unlikely that in the ordinary way the makers or vendors of a worthless proprietary medicine can be brought to book by the operation of the Food and Drugs Acts. Even if the new Section relating to proprietary medicines were abolished, the Act would still be practically useless, since a purchaser asking for A's pills and getting A's pills would be getting an article of the nature, substance and quality demanded and no offence would be committed.

Better Control Ahead

The Merchandise Marks Act and the Larcency Act are also of practically no value with respect to these articles, and no State Department concerns itself with either their sale or advertisement. This country is practically the only civilized country in the world which has no means of controlling these articles, and in view of the immense amount of harm that may be caused by them, this lack of control is a national disgrace. As an example of the state of British as compared with foreign law on the subject, it may be of interest to mention that one person is said to have made a profit of £60,000 in this country by advertising and selling an alleged vibratory cure for many diseases, whereas for the same procedure in France, he was fined £120 and sentenced to three years' imprisonment.

What is wanted is entirely fresh legislation to deal with the matter. The Ministry of Health should exercise control over the advertisement and sale of all proprietary and patent medicines. The exact formula of them should be furnished to the Ministry, together with a full statement of the claims made, and these should be examined by a competent body of assessors, with power to prohibit or permit in the public interest the sale and advertisement of any proprietary and patent medicines.

The whole of the facts relating to these articles were gone into by the Select Committee on Patent Medicines, in 1912, and a report was adopted which condemned utterly the present lack of supervision, and suggested stringent alterations in the existing law and new legislation of a thoroughgoing kind. Unfortunately, these recommendations have never been carried into effect, but the report is still available and a public service will be done by the first Government acting on its findings.

Food and Drugs (Consolidation) Act

On January 1, 1929, the new Food and Drugs (Consolidation) Act came into force, and this will regulate all future proceedings. It repeals the four previous Food and Drug Acts of 1875, 1879, 1899 and 1927, and re-enacts their provisions with a few minor alterations. The Margarine Act of 1887 and the Butter and Margarine Act of 1907 are also included in its scope. The consolidation of these various Acts is, of course, a convenience, but, unfortunately, there are other Acts dealing with food which are not included, and an excellent opportunity has also been lost of bringing up to date the whole of the legislation dealing with foods and drugs.

Conditions are very different now from what they were 20 years ago, to say nothing of 54 years ago, when the first Food and Drugs Acts were passed, the provisions of which still mainly govern the procedure to be taken. The opportunities for profitable adulteration and misdescription are nowadays largely in the hands of wholesale manufacturers, and not to anything like the same extent in those of the small private trader. The original Acts were intended to deal with the latter class, and there is scarcely any provision made for dealing with the big manufacturing firms, who are generally the cause of any trouble which may occur.

No Fresh Matter Introduced

The 1928 Act simply re-enacts, without any material change, the features of the older Acts, and no attempt has been made to introduce fresh matter to make it more possible to get at the actual offenders.

In most cases the makers of an adulterated article which has been bought at a retail shop in a local

authority's district have no premises in that district, and a sample cannot be bought directly from them. The only procedure in this case is to take a sample of the article on delivery at the retail shop, either at the request of or with the consent of the retailer. There are obvious difficulties which may be encountered here. It may be necessary to wait a considerable time before the retailer wishes to order another consignment, and meanwhile the makers may get wind of the trouble. In any case, it usually means that a large amount of time is wasted waiting for delivery.

Oversights in the Act

By a curious oversight, the word "drug" has been omitted in the Section dealing with the taking of samples on delivery both in the original Act and in the new Act, and this means, of course, that if a retailer sells and adulterated drug, for which he has no warranty from the wholesaler, there is no means whatever of getting at the latter. The retailer may be perfectly innocent in the matter and may have bought the article in all good faith and sold it in the belief that it was perfectly genuine, yet, under the Act, he is the only person who can be proceeded against. The insertion of the word "drug" in the Section would have made it possible, even if perhaps very difficult, to fix the responsibility on the makers.

There are a number of these oversights perpetuated in the new Act which, if corrected, would have materially increased its value. For example, the definition of butter in Section 34 reads: "The expression butter means the substance usually known as butter, made exclusively from milk or cream, or both, with or without *salt or other preservative*." This is in direct contradition to the Preservative Regulations, which forbid the addition of preservative of any kind to butter, and may raise an awkward legal discussion. By this Section also, salt is included as a preservative, but according to the Preservative Regulations, it is not to be regarded as a preservative.

The Labeling of Foodstuffs

One of the most important directions in which the provisions of the Act is lacking is that relating to the improper labelling of foodstuffs. This has assumed considerable importance in the last few years, and is likely to become more important as advertising methods become more "artfully scientific."

The only Section of the Act dealing with this offence is Section 30, which states: "Every person who wilfully gives a label with any article of food or drug sold by him which falsely describes the article sold shall be guilty of an offence." This Section is practically inoperative, since it is generally almost impossible to prove that the label was given wilfully. It would be useful if the word were dropped altogether and the mere giving of a false label made an offence. Manufacturers would wbe careful in this event to limit the matter on a label to statements capable of substantiation. Some amendment of the law is required to cover the cases of misdescription which are characterized by the judicious use of small type. Statements may be made on a label which may certainly reveal the admixture or the character of the article itself, but the size of the type used for the declaration, or the color of the label itself, or the part of the label chosen in which to print it, maybe illegible at a distance or two or three feet. For instance, in a case coming under the writer's notice a declaration of admixture was made in letters 2 millimetres long, printed in a purple-red color on a blue ground. This was practically invisible at a distance of three feet, but a closer examination revealed the fact of its presence, and, legally speaking, it was legible.

The purchaser's attention, however, would undoubtedly be attracted principally, if not solely, by the main declaration on the label, which was in blue letters on a white ground, nearly a centimetre in length. This kind of thing is indefensible, and it should be insisted on by the law that a declaration of admixture be made in as bold a type as that used for the rest of the description.

Legal Definitions and Standards

Legal definitions and standards for certain foods and compounded articles are also very necessary. So-called "trade custom" has in more than one case allowed the original meaning of the name of an article to become degraded, until, by the trade (but not by the public), the term is construed to mean something very different from what it at first implied. The position has become, in more than one case, as difficult for the manufacturer as for the customer. The better-class makers still endeavor to turn out an article with a composition corresponding to the original meaning of its name, while less scrupulous firms in larger and larger numbers use cheaper ingredients foreign to the genuine article. Competition becomes keener and keener, and in many cases the better-class goods are forced out of the market simply because the same name is applied both to the high-class and to the inferior articles, and the public, often with no means of discrimination, naturally select the cheaper one.

This complaint has been made to the writer by numbers of manufacturers who had had to descend to making an article which, a few years ago, they would have scorned to have put on the market. There is no reason why these cheaper goods should not be sold—they are in most cases quite wholesome—but it is distinctly unfair both to the manufacturer and to the public that the composition of them is not declared, and the use of the time-honored names of the original article not forbidden, without qualification of some sort.

Provisions of this sort should be accompanied by a widening of the power of the so-called "sampling officer" so as to enable him to take samples direct

from the wholesale dealer or from the makers of an article which is being sold by retail in his district, contrary to any of the provisions of the Act, whether the wholesale dealer or the maker be in his district or not. This would make it impossible, as so often happens at present, for the real offender to escape, simply because he is outside the local authority's jurisdiction. A provision similar to that mentioned has been made under the Preservative Regulations, where the Authority instead of, or in addition to, taking proceedings against the seller may take proceedings against any previous seller, notwithstanding that such sale took place outside the district of the Authority.

The Public Analyst is very often put in a very anomalous position, when he cannot recommend prosecution in cases where it is well deserved, simply because he knows that from the legal point of view there is no case to go on. His aim is to ensure that both the consumer and the honest manufacturer have a square deal, and under the present Food and Drugs Acts this is often literally impossible.

Convallatoxine

This is a new glucoside of convallaria majalis; it possesses cardiac properties and its chemical properties have been investigated. The activity of the drug, particularly of the blossoms, when determined on the frog, is from three to four times as effective as that of digitalis. The glucoside is found in the herb as well as in the blossoms of lily of the valley, but it is more advantageous to extract it from the latter, for the reason that then its purification is simpler and the yield is better.

To obtain it, the author precipitates the aqueous extract of the drug by means of lead acetate, filters and after removing the excess lead in the filtrate, agitates the solution with animal charcoal, which quantitatively absorbs the glucoside. The charcoal, containing the latter, is then dessicated and extracted with chloroform, which is distilled under a vacuum. The remaining oil is treated with methanol and petrolatum. Then the crude glucoside is dissolved in absolute alcohol, the solution precipitated by means of ether and the precipitate purified by crystallization from very hot water and alcohol at 20°C.

The glucoside, which is obtained in this manner, is in the form of needles and melts between 212° and 213°C, while it can be obtained by crystallization from acetic ether in the form of a crystalline mass melting at 230°C. It is very difficultly soluble in water, quite difficultly soluble in chloroform and ethyl acetate, more easily soluble in ethyl alcohol and acetone, and insoluble in ether. The compound does not contain nitrogen. The substance dried in air contains 57.55° carbon and 7.99% hydrogen. It is optically inactive. It has a bitter taste. W. Karber, Apoteker Zeitung, 1929, pages 230ff.

Picralima Klaineana

An examination was made of the seeds, leaves and bark of this botanical. The methods that were used in testing the product are described. The tests demonstrated the presence of alkaloidal substances in the spermoderms and pericarps (seed-vessels) of the plant. It appears certain that the content is less than in the seed and that an amorphous alkaloid predominates. It can be said that the seeds of the plant should be used for the isolation of the alkaloid rather than the leaves or bark. E. Delvaux, Journal de Pharmacie de Belgique, 1929, pages 429-430.

Assaying Kola Preparations

This article is principally concerned with a new form of extractor which is used in the determination of theobromine and in the assay of kola preparations. The instrument is called "perforator" and consists of a combination of a soxhlet extractor and separator. Solvents which are heavier than water, for example chloroform, are used in this apparatus. The instrument consists of a wide cylindrical vessel, the top of which is closed by means of a reflux condenser. The lower end of the vessel is sealed to one arm of a narrow U tube. The other arm of the U tube is longer and is connected at the side with a wider tube which is arranged vertically and which is in turn sealed laterally close to the top of the cylindrical vessel. Glass wool and beads are placed in the bottom of the latter covered over with a layer of chloroform. The liquid which is to be extracted is floated on the surface of the chloroform.

The solvent is boiled in a flask which is fitted into the bottom end of the wide tube and the vapors which are condensed in the reflux condenser fall through the liquid which is being extracted. The excess of these condensed vapors overflow slowly into the solvent flask returning to it through the two U tubes.

Extraction is very rapid in this apparatus. This is due to the higher temperature at which the operation is carried out. Only a small quantity of solvent is required and all of the solvent is recovered. It is reported that the apparatus give excellent results in the determination of caffein in kola products.

When kola extracts and granules are being analyzed, the material is first dissolved in warm water, weakly alkaline with ammonia, and then extracted four hours with chloroform. Kola nuts are first finely pulverized and then the pulverized mass is macerated on a brine bath for one hour with dilute sulphuric acid. When the starch in the paste has been decomposed and the pasty mass has been changed in form, the solution is neutralized with sodium hydroxide solution and then rendered slightly alkaline with ammonia. It is then extracted with chloroform for four to five hours. The anhydrous caffein crystallizes out after the chloroform has been removed and is obtained 98 per cent. pure.

It is stated that the need for making numerous extractions with boiling chloroform in the determination of the bromine in cocoa products is obviated by means of the new apparatus. Thus ten grams of the finely ground material is first extracted with carbon tetrachloride in a Soxhlet to free it from fat, and then after the solvent has been removed, the powder is mixed with thirty to forty cubic centimeters of water containing 25 cc. of a normal solution of sodium hydroxide. The suspension is diluted to 250 cc. by the addition of more water with shaking. The mixture is kept over night, and then 125 cc. of the supernatant liquid are slightly acidified with hydrochloric acid and extracted with chloroform for five hours.

The small amount of caffein, that is contained in the white product after evaporation of the chloroform, is removed by means of benzene. The mass is then dride. The purity of the theobromine is checked by dissolving the powder in 10 cc. of a normal solution of sodium hydroxide, containing 10 cc. of normal solution of acetic acid and 20 cc. of 0.1 normal solution of silver nitrate. The mass is shaken and kept over night. Then the excess silver is titrated with the aid of a 0.1 normal solution of sodium thiocyanate, the calculation is made on the basis that 1 cc. of the tenth normal solution of silver nitrate is equivalent to 0.0180 gram of theobromine. Japade, "Ann. Falsif.," 1929, volume 22, pages 396-405.

Catalytic Production of Benzaldehyde

Catalytic oxidation of benzyl chloride with superheated steam is accomplished with the aid of vanadium pentoxide as catalyst. The yield is 74% of theoretical in benzaldehyde. Up to 10% of benzoic acid is also obtained. Anthraquinone is not formed. Journal prakt. Chim., 1929, pages 149-154.

Ergot Pharmacology*

A method for the estimation of specific alkaloidal activity of ergot preparations upon the isolated uterus of the guinea pig.

By Marvin R. Thompson

THE recent literature on ergot leads to a belief that the specific alkaloidal activity of ergot is due to ergotamine and ergotoxine and that these two alkaloids are identical as to pharmacological and clinical action, although they differ somewhat in chemical structure and physiological potency (13, 1, 28).

The chemical studies of Kraft, Tanret, Barger and Stoll have made these alkaloids available in the pure state. By the successful isolation of these alkaloids of ergot, pharmacological and clinical studies on them were made possible. The reports of these studies tend to establish that the ergot alkaloids are specific for the drug and responsible for the desirable clinical effects of ergot preparations, while the amines (histamine, tryamine, etc.) are non-specific and therefore relatively unimportant from the clinical standpoint.

Because of the great amount of experimental evidence thus set forth, the present tendency in the biological assay and standardization of ergot preparations is to employ methods that measure the specific alkaloidal activity, disregarding completely the presence of the non-specific amines. Just what part the amines, such as histamine and tyramine, play in the clinical activity of ergot preparations is not definitely known, although histamine, the most important of them, is reported to be practically without effect when administered orally (14) at least in the amounts ordinarily found in these preparations. Both histamine and tyramine manifest great activity when administered hypodermically, however, and it is possible that they play a part in the action of preparations intended for hypodermic use. It is generally known that the ergot alkaloids are effective *both orally and hypodermically* and that they are specific for the drug, thereby establishing their greater importance.

Of the many methods proposed for the biological standardization of the specific alkaloidal activity of ergot preparations, only two have shown sufficient reliability in application to warrant general recognition. These are the so-called Cock's Comb test, official in the U. S. P., and the Isolated Rabbit Uterus Method of Broom and Clark (13). Pattee and Nelson (28) found these two methods to yield practically identical results in estimating the alkaloidal activity of ergot preparations. Broom and Clark (13) were unable to get accurate results by the Cock's Comb Method because of variation in susceptibility of cocks. Edmunds and Hale (30) found the Cock's Comb Method to be reasonably accurate. In the writer's experience, the two methods yield comparable results in most instances, but great variations were observed in some cases. The results obtained in comparative studies of these two and other methods will follow in other papers of this series.

*Part III of address before A. Ph. A., Rapid City, 1929. Printed by courtesy of "Journal A. Ph. A."

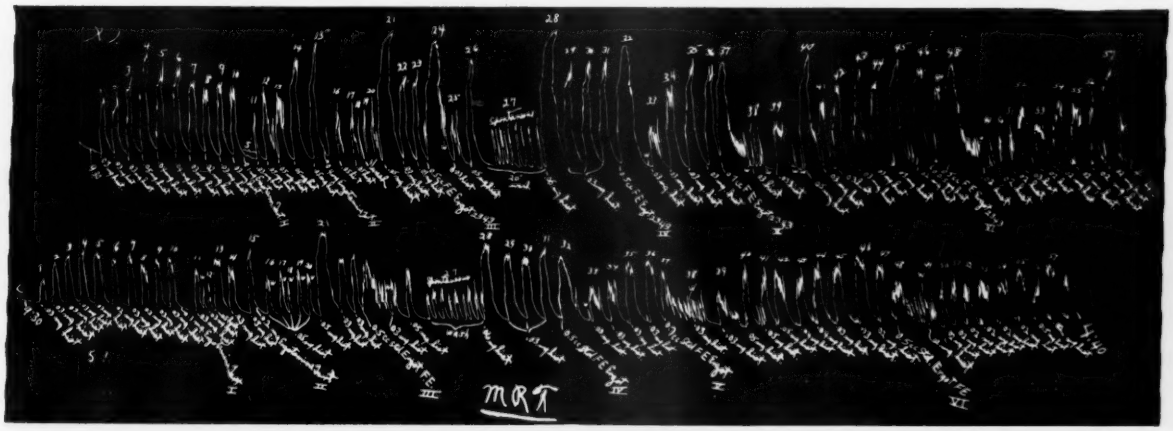


Figure VII

A method for the estimation of the specific alkaloidal activity of ergot preparations has been developed which, it is believed, is worthy of consideration, since it clearly shows the difference between the amine and alkaloidal activity of Ergot upon the isolated uterus of the guinea pig. This method is comparable to the Isolated Rabbit Uterus Method of Broom and Clark (13), with the exception of the smooth muscle employed and the substance used for stimulating the tissue to contraction. Bio-assayists experienced in the use of the Rabbit Uterus Method have found considerable difficulty in obtaining rabbits of the type necessary, as pointed out by Pattee and Nelson (28) and Swanson (34). Guinea pigs are comparatively plentiful and are cheaper than other experimental animals suitable for the purpose. The uterus of the guinea pig is utilized in the new method.

The well-known "ergot alkaloid-epinephrine reversal" cannot be applied to the guinea-pig uterus because epinephrine causes relaxation instead of contraction of this tissue. It has been shown that a similar relation exists between the ergot alkaloids and histamine (Part II). Histamine was shown to cause definite tonic contraction of strips of isolated guinea-pig uterus of a specified type. This contraction could be inhibited or abolished by allowing the ergot alkaloids to act upon the tissue for a short time. A certain definite concentration of ergot alkaloids is required to produce this inhibition or reversal and therefore this reaction can be utilized to estimate the quantity of alkaloidal activity in ergot preparations.

The method has two distinct advantages over the Isolated Rabbit Uterus Method. Suitable guinea pigs are more readily available than suitable rabbits, and the uterine strips of the guinea pig recover from the effects of the ergot alkaloids rather quickly, thereby permitting several trials upon a single strip (Fig. VII).

The Ergot Alkaloid-Histamine Reversal

The first evidence of this reversal was observed in pressor studies of ergot preparations. This led to the supposition that it should be possible to produce further evidence of such a reversal upon uterine muscle. Experimental results (Part II) show the inhibitory action of ergot alkaloids upon the response

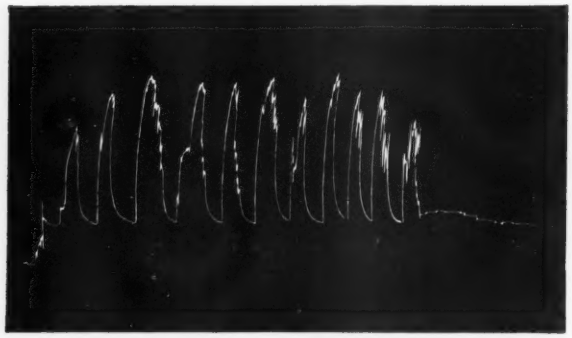


Figure III

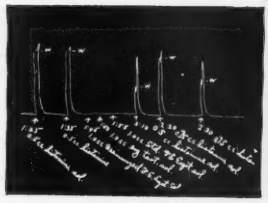


Figure I

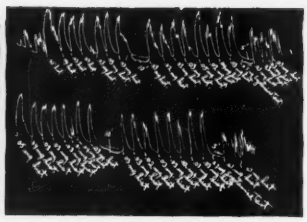


Figure VI

of the isolated guinea-pig uterus to histamine or ergot amines. Broom and Clark (13) in their Figure IV, actually show this reversal relation between ergot alkaloids and amines upon the isolated guinea-pig uterus, although they offer an explanation with which the writer does not entirely agree. They show the effect of a B. P. Liquid Extract upon one horn and of a U. S. P. Fluidextract of Ergot upon the other horn of the isolated uterus of the same guinea pig. The response of the muscle to the B. P. extract remained constant "because it depends entirely on the histamine content." The writer agrees that this preparation contains practically no active alkaloids, but, because of experimental pressor studies, believes that the activity is due to a mixture of amines rather than to histamine alone, although histamine is the most active and predominating amine regarding activity. The response of the muscle to U. S. P. Fluidextract of Ergot, in the same illustration, "becomes less on repetition because it depends largely on the alkaloidal content of the ergot." This, in the writer's experience, is true only in part. Since, as Broom and Clark state, both of these preparations were made from the same batch of ergot, each should contain comparable quantities of active amines. The B. P. and U. S. P. processes of manufacture, if the same batch of drug is used in each, yield preparations which are similar with repsect to amounts of non-specific amine activity, differing only in the specific alkaloidal content. The U. S. P. Fluidextract always contains more of the alkaloids than the B. P. preparation. This has been shown repeatedly by the writer. Broom and Clark (13) explain the diminishing response from the repeated administration of the U. S. P. Fluidextract to the isolated uterus of the guinea pig as follows: "* * * the amines present in ergot produce an effect as great or greater than that produced by the ergot alkaloids. The ergot alkaloids, moreover, can only excite the uterus once and after the first application of ergotamine the uterus will not respond to a second administration although its excitability to histamine is unaltered. The ergot extracts were found to vary as regards the constancy of the reaction they produced; submaximal doses of the B. P. preparations produced constant response repeatedly, whereas with submaximal doses of the U. S. P. preparations the first application produced the greatest response. This effect is shown in Figure IV. Apparently in the case of the U. S. P. preparations about half the action on the guinea pig's uterus is due to its alkaloidal content

and about half to its amine content. In the case of the B. P. preparation the whole action is due to its amine content."

These investigators do not state the type of guinea pigs used in their work. Experiments involving different types of guinea-pig uteri definitely show that this is a vital factor. The isolated uteri of young, immature guinea pigs usually are stimulated to contraction by both the alkaloids and the amines of ergot, histamine being decidedly most active in this respect. The resultant effects of mixtures of alkaloids and amines were found to be similar to that described by Broom and Clark (13) for U. S. P. Fluidextract of Ergot. If the isolated uteri of larger, mature guinea

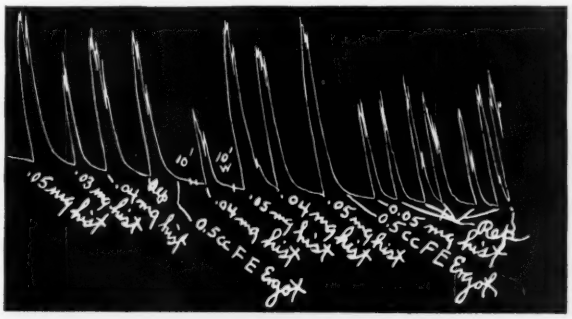


Figure V

pigs are employed, however, the contractions produced are due almost entirely to the amines present. In the case of B. P. Liquid Extract or the N. F. V. Aqueous Extract, constant response of the tissue is observed because the activity of these preparations depends almost entirely upon the amine content. Fluidextract of Ergot contains all of the amines and alkaloids that were present in the parent drug. The first application of this preparation to the uterine strip results in a contraction whose magnitude depends upon the amine content of the fluidextract. Upon repetition of the application the response diminishes, the lessening of the response depending upon the proportion of alkaloids and amines present and the time the preparation is permitted to act upon the tissue before replacing the poisoned Locke's solution with fresh Locke's solution. This diminishing effect is shown in Figure 1, Part II of this manuscript, and is explained by the "ergot-alkaloid-histamine" reversal therein described. This consists essentially in the ability of ergot alkaloids to inhibit or abolish the response of the guinea-pig uterus to histamine or ergot amines in a manner analogous to the well-known "ergot-alkaloid-epinephrine" reversal upon the rabbit uterus.

The utilization of the "ergot-alkaloid-histamine" reversal upon the guinea-pig uterus in estimating the alkaloidal activity of ergot preparations would at first seem impossible, as all of these preparations usually contain variable quantities of histamine as well as other amines. Therefore, when the ergot preparation is applied, the presence of histamine or other amines of ergot would increase the ultimate amine concentration of the bath, causing an abnormally great contraction of the uterus when the histamine effect was observed after the alkaloids had exerted their definite inhibiting effect. Experimental studies have shown that the natural amine content of ergot preparations causes no greater interference in this method than in the Rabbit Uterus Method, in which the test contraction is induced by epinephrine. The amine interference is obviated in the Isolated Guinea-Pig Uterus Method in the same way that the same interference is obviated in the Isolated Rabbit Uterus Method as modified by Pattee and Nelson (28). These investigators state that by sufficient washing of the strip of rabbit uterus after the ergot preparation has acted upon it for a definite length of time, but before the final epinephrine response is observed, the interfering amines are removed, thereby permitting the epinephrine to produce its true alkaloid-inhibited response. They also show definitely that the amines may be present in amounts sufficient to increase the ultimate epinephrine response if the washing technique is not observed. By observing the same technique the amine interference is obviated in the Guinea-Pig Uterus Method, also.

Method

The method is based upon the ability of the active alkaloids of ergot to inhibit or abolish the response of

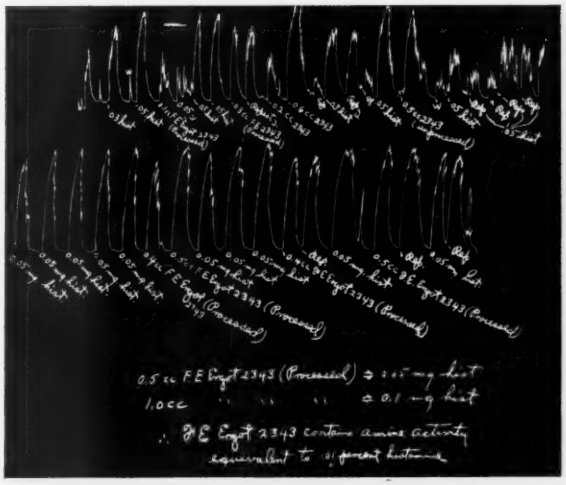


Figure IV

the isolated guinea-pig uterus to histamine (Fig. V) in a manner analogous to the "ergot alkaloid-epinephrine" reversal principle utilized in the Isolated Rabbit Uterus Method of Broom and Clark (13). The method is carried out in the same manner as the Broom and Clark Isolated Rabbit Uterus Method (13, 28) except that similar strips of guinea-pig uterus are used instead of similar strips of rabbit uterus, and histamine is used instead of epinephrine to induce the contractile response.

The apparatus, Lock's solution, and smooth muscle employed in this method are the same as those used in the method described for the estimation of the non-specific amine activity of ergot and its preparations (Part II).

Technique

The uteri are obtained from mature guinea pigs weighing from 500 to 800 grams, taken several weeks post-partem. Segregation of proper animals immediately after parturition largely obviates obtaining unsuitable uteri. The animal is killed by a blow on the head and the uterus is carefully dissected out in the usual manner, removing fallopian tubes, ovaries, etc. From the larger uteri, eight to twelve suitable strips may be obtained, each horn being divided into two or three cross sections, which, in turn, are halved longitudinally by two parallel cuts, one directly along and one directly opposite the mesenteric attachment. These strips are immersed in physiological saline solution and kept on ice. In this condition they may be kept for three or four days, but it is preferable to use them before so long a time has elapsed. It has been the practice of the writer to make but one of the longitudinal cuts along each cross section before the section is to be used. When the section is to be used the other cut is made, dividing the section into two similar strips. This insures the use of similar, instead of dissimilar strips.

Two similar strips are then mounted in separate chambers of the apparatus and arranged to record in the usual manner. The tension used is of paramount importance. It must be sufficient to produce relaxation and prevent appreciable spontaneous rhythmic contractions but not so great as to prevent a good contraction or cause the strip to show symptoms of fatigue (as evidenced by a diminishing response to a constant dose of histamine) in repeated application of histamine. Each strip used is a problem unto itself in this respect. The tension to be used can be determined only by experience. When properly weighted the spontaneous contractions are not in evidence, but a prompt contraction is produced by the addition of a proper concentration of histamine. The poisoned Lock's solution is replaced with fresh solution after each dose as soon as the maximum amplitude of the contraction is attained.

As shown in Figure VII, the response of the strips to constant doses of histamine usually increases during the first few trials. In the writer's experience it is of advantage to let the strips stand for half an hour before testing their response to histamine. The response will then be more constant than it would if histamine were introduced immediately after mounting. The dose of histamine which will produce a pronounced but submaximal contraction is then determined by trial. This dose is repeated until the response of the strip becomes constant. After waiting twenty minutes, the constancy is again observed. Having this determined the dose necessary and the constancy of response to this dose, the strips are in readiness for testing the alkaloidal activity of the ergot preparation.

The standard, which may be either the U. S. P. Standard Fluidextract supplied by this laboratory or a solution of one of the specific alkaloids, is added to one bath and the preparation to be tested is added to the other. In each case, the time of the addition of each is accurately recorded. At this point an indication of the non-specific amine activity of the preparation may be obtained. If the amine content is low,

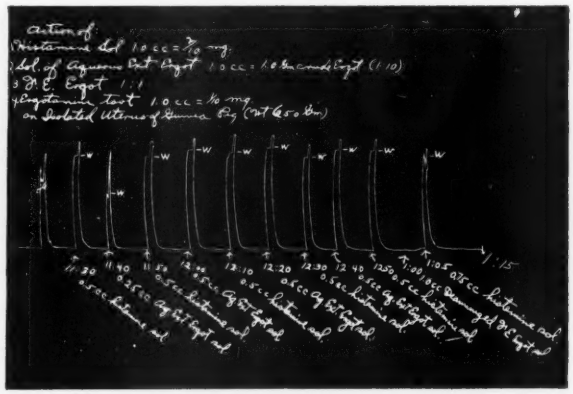


Figure II

a low contraction will result; if high, the contraction will be correspondingly great. Occasionally preparations will be found to contain enough amines to cause a maximal contraction when they are added to the bath (Fig. VII). In any case, however, the strip gradually relaxes. The ergot preparation is allowed to act on the strips exactly fifteen minutes in each case, after which the strips are washed. After another three minutes the previously determined dose of histamine is repeated. When its effect has been obtained it is washed off and in a few minutes repeated as a check, all factors being carefully kept identical for each strip. Similarly, at definite time intervals of a few minutes, the effect of further repetitions of the same histamine dose is observed. The potency of the preparation is determined by a comparison of the percentage inhibition produced by the unknown with the percentage inhibition produced by the standard in a manner identical with that recommended by Pattee and Nelson (28) in carrying out the Broom and Clark Method. The dose of ergot should be sufficient to reduce the histamine response 25 to 50 per cent. Further reduction is hardly significant, as spontaneous rhythmic contractions of low magnitude frequently develop, making the exact inhibition difficult to determine. After several washings the uterus soon recovers from the effect of the ergot alkaloids. When the histamine repsonse again becomes constant, as it usually does within half an hour, another trial of the ergot preparation may be made.

The effect of the repetition of application of ergot alkaloids and recovery of the similar strips of guinea-pig uterus is shown in Fig. VII. In this experiment the effects of six different trials with alkaloidal ergot preparations were observed over a period of more than seven hours, at the end of which time each strip was still functioning satisfactorily.

It will be noted in the illustrations that much higher concentrations of ergot alkaloids are necessary to appreciably inhibit the histamine response of the guinea-pig uterus than are required to diminish the epinephrine response of the rabbit uterus. The inhibition of the histamine response depends upon two factors, the concentration of ergot alkaloids employed and the length of time the alkaloids are permitted to act upon the strips. In general, the concentration of the ergot alkaloids employed bears an inverse relation to the time of action necessary to produce a definite inhibition. Therefore, increasing the time of alkaloidal action from 5 or 10 minutes (as used in the Broom and Clark Method) to 15 or 20 minutes permits the effective concentration of ergot alkaloids to be lowered.

It is impossible to state the concentration of ergot alkaloids or of histamine to be employed because of the variations in uteri. The illustrations give approximate indications of concentrations when 100-cc. tissue baths are used, although in these experiments the time interval used was varied. Table I shows typical results obtained in an assay:

Table I. Results Obtained from Similar Strips of the Same Guinea-Pig Uterus

	Commercial sample Fluid-extract of Ergot No. 6		*Standard Fluidextract of Ergot*	
	Dose (in 100 cc. baths)	*Inhibition*	*Dose (in 100 cc. baths)*	*Inhibition*
Trial no.	*Cc.*	*per cent.*	*Cc.*	*per cent.*
1	0.5	> 60.0	0.5	40.6
2	0.25	42.1	0.5	44.2
3	0.25	44.7	0.5	46.6
4	0.2	35.8	0.5	44.5
5	0.15	30.0	0.5	47.2

> More than. < Less than.

The results in Table I show that 0.25 cc. Fluidextract No. 6 is approximately equivalent to 0.5 cc. of Standard Fluidextract Ergot. In other words Fluidextract Ergot No. 6 is approximately twice the strength of the Standard.

The results obtained by this isolated Guinea-Pig Uterus Method agree in most instances with those obtained by the Cock's Comb and the Broom and Clark Rabbit Uterus Methods. Comparative studies of these three methods will be given in another paper of this series.

Summary

Studies involving the use of the isolated uterus of the mature, non-pregnant guinea pig have shown that the specific alkaloids and the non-specific amines of ergot act in a decidedly dissimilar manner. The pure alkaloids increase the tonus in ryhthmic contractions but are relatively ineffective in stimulating prompt tonic contractions. The non-specific amines (histamine and aqueous extracts of ergot containing essentially nothing but histamine, tyramine, etc.) are very active in inducing prompt tonic contractions. The tonic contractions produced by histamine or mixtures of the non-specific amines of ergot can be inhibited or abolished by permitting the specific ergot alkaloids to act upon the muscle for a time.

It was observed further that the inhibition of the amine response of the isolated guinea-pig uetrus by the ergot alkaloids depended upon the concentration of ergot alkaloids used and the time the alkaloids were permitted to act.

The method for the estimation of alkaloidal activity of ergot preparations here described depends upon this "histamine-ergot alkaloid" relationship upon the isolated guinea-pig uterus.

Comments on the Paper on Biological Standard for Ergot Presented by Marvin R. Thompson, at the Rapid City Meeting of the A. PH. A.

By H. H. Rusby, M. D.

Since September of 1927, I have been engaged in securing the application of the U. S. P. biological test to a large number of samples of ergot and Fluidextract of Ergot. The methods followed in this work have been such that the tests have been quite as much tests of the method of testing as of the samples of ergot employed, and I feel that the results have an important bearing on the question raised in Mr. Thompson's paper.

It is to be noted that I have not in any case applied this test myself, so that personal prejudice is quite impossible. However, in very few cases has the analyst making the test had any knowledge as to the source of the sample, which has been supplied through a third party. In almost every case, the same sample has been referred to more than one analyst, in several cases to three and in one case to four. Again, the same sample has gone to the same analyst more than once, without his knowledge that he had previously tested it. It will thus be seen that the samples and the tests have depended for the results, solely upon their own merits.

Under these conditions, I have received the following reports of relative therapeutical strength, by percentage, exact conformity with the U. S. P. test being regarded as indicating 100 per cent. The reports, on the same lot of ergot, thus referred to different analysts and to the same analyst at different times, are as follows: "90.9%–100%–110%–112%–123%–133%–155%–165%–167%. Not all of these figures referred to the same lot of fluidextract, al-

though all the fluidextracts were made from the same lot of ergot.

Equally discordant reports have been received from portions of fluidextract taken from the same bottle. Thus, three such samples were sent for comparison to two different analysts. One reported 128%, 130% and 125%, the other reported 166%, 166% and 250%.

Of two other samples sent to the same analyst, one reported 125% and 167%, the other 155% and 125%. It happened that one of my samples was submitted by Chairman Cook of the Revision Committee to some official at Washington. Regarding the results of this test, Professor Cook has told me that "it showed 100%, the same as the others." I took the precaution to send this sample to two analysts who reported 128% and 168%. Another sample that has been reported in a printed article as being of 195% to 200%, the identity of the sample not being stated, I believe to be the same as the one above referred to.

From this experience of two years, involving a large number of samples, I feel sure that the Cock's Comb test cannot be regarded as capable of yielding reasonably uniform results in the hands of different analysts, or of the same analyst at different times.

It is also true that any sub-standard fluidextract can be caused to meet and exceed the biological requirement by the addition to it of a minute amount of some substance that cannot be detected by the analyst.

Another conclusion regarding the value of this test is justified by the following experience.

A lot of ergot, stored in bags in a warehouse, was thoroughly watersoaked in the extinguishing of a fire that occurred in that warehouse. After lying in this condition in a damp basement for three weeks, this ergot was examined by three arbitrators, in order to fix the amount of damage, for the fire underwriters. At this time, the ergot was still thoroughly watersoaked, a mass of mould, emitting a very offensive and rancid odor, thoroughly decolorized on the surface, and to a great extent internally, many of the grains being soft and mushy, and there being extensive decomposition of the fat and proteid matter, and supposedly also of the alkaloids. The ergot was unanimously voted unfit and dangerous for use and was written down as a total loss. Nevertheless, samples of this ergot that I had submitted to biological test by two pharmacologists were reported as having 125% and 167% of the official strength.

From this and many similar experiences, I conclude that the Cock's Comb test will indicate perfect quality in an ergot that is badly decomposed and unfit for use.

Another fact that I have long known and which has been confirmed by these experiments is that no necessity whatever exists for the Cock's Comb test in its present form, even assuming that it was reliable. It is not often that a sample of ergot, that any competent judge of the drug would accept as being of fair quality, is found deficient by the Cock's Comb test, but I have known a great many that any competent judge would condemn as unfit for use that were indicated as of good quality by this test. Indeed, if there is any conflict between a judgment based on physical examination of the drug and the result of the Cock's Comb test, then I am prepared to say that it is the test that is at fault.

The only value of this Cock's Comb test, and the only actual use that has been made of it, is to secure the approval of ergot that is not entitled to confidence, and to prevent the retail pharmacist from supplying fluidextract of his own manufacture. This should be denominated abuse, rather than use! It will doubtless interest this audience to know that on one occasion, after I had lectured to my students on the subject of ergot, I advised them that the most certain method by which they could supply a perfect fluidextract of ergot was to carefully select the drug according to the instruction received in our class in pharmacognosy and to make their own fluidextract by the process taught them with equal care in the department of pharmacy. After the lecture several of them came to me and reminded me that the requirement of the biological test made it impossible for them to dispense the drug of their own manufacture, as they had no means of applying this test. My answer was that they would be perfectly justified in dispensing such a fluidextract without the formality of making the test.

Preparation of Plant Alkaloids

This is a general article on the subject. The occurrence of the plant alkaloids is mentioned. The general method of the preparation of the alkaloid is described. Mention is made of the fact that the drug must be quite finely pulverized so that the greatest possible surface comes into contact with the solvent. Sawdust and the like are often admixed with the drug in order to facilitate the passage of the solvent through the mass. Before treatment the mass is advisedly allowed to remain for some time so that it can swell up uniformly. This prevents clogging up the extraction apparatus due to swelling of the mass in it.

The purification of the alkaloids is also discussed. The removal of impurities, resins, fats, color, etc. is described. Mention is made of the need of haste in working with ether solutions of hyoscyamin which easily separates from its solution. Various apparatus used are described. Dr. Duilius, "Chemiker Zeitung," 1929, pages 785-6.

Porto Rico Takes More

Imports of medicinals from the United States into Porto Rico continue to increase, as evidenced by the following table:

Year	*Value*
1923	$631,536
1924	720,593
1925	668,901
1926	$950,787
1927	846,670
1928	1,056,639

Porto Rico is exceeded only by Cuba, Columbia, and Mexico, in the order name as Latin American markets for medicinals manufactured in the United States, according to Trade Commissioner J. R. McKay, San Juan.

Crude Drug Detentions For Year Ending July 31, 1929

W. R. M. Wharton, Chief of the Eastern Inspection District of Food, Drug and Insecticide Administration of the United States Department of Agriculture, announces that for the year ending July 31, 1929, a total of 4,017 shipments covering approximately 300 varieties of crude drugs and aggregating 75,880,000 pounds of material (exclusive of cod liver oil) offered for importation were examined by the Eastern District. Of this amount 247 shipments totaling 3,826,477 pounds or 5% was detained as being in violation of the provisions of the Federal Food and Drugs Act. In addition, 2,689,815 gallons of cod liver oil were examined of which 705,217 gallons were detained.

In the previous year total importations examined amounted to upward of 67 million pounds of which approximately 7,569,000 pounds or 11.2 per cent. was detained and two years ago of 63 million pounds examined approximately four million pounds or 6.3 per cent. was detained.

While the percentage figure for detentions this year is markedly lower than that for last year, this is not to be construed as indicating that the improvement in the quality of crude drugs was proportionate to these figures since last year's detentions were augmented by large amounts of sea water-damaged licorice root which accounted partly for the higher percentage figures for that year. The quality of many drugs, according to Mr. Wharton, has not shown any marked improvement. Conditions in which enforcement authorities have reason to expect improvement, still remain unchanged and forms of adulteration which should have disappeared by reason of previous exclusion, still persist.

The following tabulation is given covering the more important crude drugs examined. Where available, Department of Commerce figures for total importations during the period under consideration are given for comparative purposes. These figures cover the total United States importations; the figures showing amounts examined and detained cover only the Eastern District, comprising the Atlantic seaboard stations.

The Food, Drug and Insecticide Administration of the U. S. Department of Agriculture considers that importers of crude drugs can assist in the correction of conditions which lead to the necessity for detentions of illegal crude drugs at American ports by specifying only legal merchandise. Importers should also, when necessary, fully advise foreign shippers of methods of handling, drying and cleaning to produce sound, clean and high grade drugs. Mr. Wharton says that the Department has reason to believe that a few importers at times buy low grade or inferior drugs "at a price," only to experience denial of entry when the goods reach American ports. Such goods often prove to be expensive rather than cheap. This practice, for the good of the industry, should be discontinued.

To avoid detentions and to bring about fundamental correction of abuses in the import trade in crude drugs, the support and co-operation of importers is earnestly sought by the Administration enforcing the Food and Drugs Act.

Product	*Lbs. Imported*	*Lbs. Exam.*	*Lbs. Detained*	*Principal Reasons for Detention*
Acacia	9,448,575	8,191,393	none	
Aconite	33,633	23,175	5,538	Spurious, wormy
Aloes	1,283,936	1,224,261	529,593	Excessive moisture
Asafoetida	88,474	80,634	3,812	Low alcohol extract
Belladonna (Roots and leaves)	203,527	158,503	7,983	Excessively dirty
Benzoin	127,619	115,073	11,076	Low alcohol extract (excessive dirt)
Buchu	143,265	120,835	none	
Burdock	87,774	68,996	none	
Cascarilla	.....	52,371	8,640	Excessively dirty
Chamomile (Hung.)	372,610	309,482	135,275	Excessive dirt and foreign matter
Cinchona	1,852,075	596,182	10,678	Low alkaloid, excessive dirt
Cod Liver Oil (Gals.)	3,012,828	2,689,815*	705,217*	Adulterated with other fish oils—high free fatty acids
Colocynth	56,770	56,770	27,091	Excessive seeds and dirt
Cubebs	52,431	52,431	7,050	Fruiting stems
Dandelion	.....	142,600	none	
Digitalis	72,825	60,867	6,176	Low poetency, excessive foreign matter
Ergot	328,198	266,501**	73,787	non-U. S. P.
Gentian	664,515	443,369	18,198	Moldy and decomposed
Guaiac	.....	16,586	2,609	Excessive residue
Henbane	68,616	49,796	none	
Ipecac	65,939	59,445	4,853	Low alkaloid-overground stems
Jalap	78,728	65,044	10,126	Insect infested
Kamala	.....	71,239	40,100	High ash and foreign matter
Karaya	3,329,388	2,508,729	none	
Licorice Root	70,174,682	15,494,832	2,250,488	Moldy
Lycopodium	48,941	40,792	none	
Myrrh	69,280	43,257	14,030	Low alcohol soluble excessive dirt
Orris Root	493,443	469,785	1,793	Worm-bored
Rhubarb	207,356	207,356	4,480	Spurious variety
Sabadilla	.....	78,966	20,432	Excessively dirty
Saffron	.....	4,160	1,606	High moisture-excessive styles
Sarsaparilla	139,369	103,020	2,969	Spurious-excessive dirt
Senna	2,605,055	2,442,612	23,396	Excessive dirt
Stramonium	307,896	290,268	15,226	Excessive dirt
Strophanthus	.....	2,734	721	Spurious
Tragacanth	1,654,636	1,654,636	none	
Triticum	.....	118,731	none	
Valerian	64,221	51,954	none	

*Estimated. **Balance examined by Central District.

{ *Patents Issued* }

UNITED STATES PATENTS

Hydrogenated Alkaloids

This process is concerned with the manufacture of hydrogenated cinchona alkaloids. The material selected from the group consisting of the cinchona alkaloids, their dihydro derivatives and their salts is treated in the presence of a solvent and a catalyst of the nickel group with hydrogen gas. The reaction is carried out at a temperature which at least in the later stages of the reaction is not less than 40 degrees C. J. W. Blagden, London, England, assignor, one half, Howard & Sons Ltd., Ilford, England. U. S. Patent No. 1,720,462, filed March 20, 1926.

Pharmaceutical Product

This is a composition of matter which consists of a solution of hematoxylin with the alkaloid quinine. The new medicinal agent may also be described as an unstable solution of an alkaloid of the quinine group and a desaccharated glucoside of the hematoxylin group. The process of making the new pharmaceutical product is as follows: gram molecular weight of quinine hydrochloride is added to 10,000 mils of boiling water, and then the solution thus obtained is mixed with gram molecular weight of hematoxylin. The solution is then neutralized with a saturated solution of sodium bicarbonate.

In the second patent a process and product are described consisting of the combination of a quinicine radical and a weak phenolic acid radical, or a radical of a member of the dihydropyran group. E. H. King, Portland, Me. U. S. Patents No. 1,720,278-9, filed April 19, 1920 and Feb. 2, 1922.

Synthetic Camphor

The patent is concerned with an improvement in the process of making camphor from turpentine by conveying pinene into bornyl ester, saponifying the ester to borneol and oxidizing borneol to camphor. Thus in the new process oxalic acid is caused to react with the turpentine, the acid being used in conjunction with a mixture of benzene and toluene. The quantity of the latter ingredients is double that of the turpentine. The reaction is carried out at a temperature which is about the boiling point of the mixture. L. Dupont, Vincennes, France. U. S. Patent No. 1,733,218, filed June 5, 1926.

Decreasing Toxic Action of Cocaines

Cocaine hydrochloride is subjected to the action of benzoic acid which is used dissolved in ethyl alcohol. Phenylurethane is subjected to the action of a solution of phenol in ethyl alcohol. The cocaine which has been treated in this manner, that is subjected to the action of benzoic acid, is treated with the phenylurethane, and then the mixture is distilled with steam at a temperature of approximately 125 degrees C. R. Eckermann, Stockholm, Sweden. U. S. Patent No. 1,733,298, filed June 26, 1926.

Closure for Containers

The opening of the container is provided with oppositely inclined circumferentially extending cam grooves. A hinge member is connected with one of these grooves and a rotable closure for the opening of the container has inwardly extending cam members co-operating with the grooves upon rotation of the closure to subject the latter to a sealing pressure upon the container. One of the cam members co-acts with the hinge member to exercise a hinge function for the closure in one rotatable position. C. R. Crary, Detroit Mich. U. S. Patent No. 1,734,367, filed July 18, 1927.

Collapsible Tube Top

A top for tubes consists of a top member. A boss is formed on it and a pin is slidably and rotatably mounted in this boss. A valve seat is located on the inner side of the boss and a valve plug on the pin coats with the valve seat. A tongue is secured to the outer end of the pin and a cam surface on the boss co-acts with the tongue. The cam surface has a depressed part. R. N. Ellis, Des Moines, Iowa, assignor one-half T. Watters, Jr. and R. W. Colflesh, Des Moines, Iowa. U. S. Patent No. 1, 735,076, filed April 4, 1928.

Dietary Composition

This composition consists of inosite hexaphosphoric acid and its alkali metal salts and of vitamines. The vitamines and the inosite hexaphosphoric acid are obtained from the same plants. They are in the dry pulverulent state and are intimately mixed together. F. Goedecke, Thusis, Switzerland. U. S. Patent No. 1,721,214, filed Nov. 14, 1927.

Increasing Yield of Civetone from Civet

This process consists in oxidizing the civetol which is contained in neutral civet oil to civetone in order to increase the yield of the latter. L. Ruzicka, Utrecht, Netherlands, assignor, Firm M. Naef & Co., Geneva, Switzerland. U. S. Patent No. 1,720,748, filed Jan. 25, 1927.

BRITISH PATENTS

Organic Mercury Compounds

Neutral reacting aromatic polyhydroxy compounds containing mercury are obtained by reacting a polyhydroxy of the benzene series with a mercury compound, for example mercruci chloride in a neutral medium such as water, and neutralizing any acid reaction of the product, due to hydroxylsis by the addition of alkali. A finely divided dry mixture of the pilyhydroxy compound and a mercurizing agent may be dissolved in water at atmospheric temperature, the resulting solution giving no precipitate of mercury oxide or hydroxide on the addition of alkali. The solution of the components of the dry mixture may be hastened by the addition of a halogen compound of an alkali metal, ammonia or an alkaline earth metal, for example sodium chloride. The compounds may be obtained in the dry form by evaporating the solutions, and pulverizing the solid residues. The products are used as insecticides and fungicides and may be combined with other water-soluble disinfecting agents. I. G. Farbenindustrie A. G., Frankfort-on-Main, Germany. B. P. No. 312,246, filed Jan. 18, 1928.

Quinine Solutions

Aqueous solutions of quinine base, suitable for hypodermic injection, are prepared by dissolving the quinine base in a solution of a quinine salt. The PH value may be adjusted to that of the blood (7.4) or that of the tissue (7.2). Examples are given in which the quinine salts used ate the hydrochloride, the formate, and the lactate. Larger quantities of quinine base may be held in solution or solutions capable of further dilution with water may be obtained by adding 1-phenyl-2:3-dimethyl-5-pyrazolon, isovaleramide, or urethane in addition to the quinine salt. Chemische Pharmazeutsiche A. G. Bad Homburg, Germany. B. P. No. 312,253, filed Feb. 21, 1928.

Cosmetics

A face powder or paint, which is lead free, consists of a solution of transparent or translucent matter, such as nitrocellulose or caoutchouc, in volatile solvents, such as acetone, ether, carbon tetrachloride or benzene, added to a white powder, such as zinc oxide, powdered talc, titanium oxide, bismuth nitrate or starch,

(Continued on page 586)

The Financial Markets

Vick Financial Reports $5,700,000

Vick Financial Corporation has issued to stockholders a statement showing that as of November 15 the company had $5,700,000 uninvested funds, or about $4.33 a share, with $7,582,972 investments divided as follows: Bonds, $677,866; preferred stocks, $836,171, and common stocks, $6,068,935. The statement, mailed to 9,000 stockholders, says:

"Our paid in capital is now $13,169,750, represented by $1,316,975 shares of common stock of $10 par value, subscribed by 8,950 stockholders from every State in the Union and more than thirty foreign countries. As you know, this capital was raised without any underwriting commissions or expense other than organization expenses and taxes aggregating only about $16,000. Consequently there is 'no water to be squeezed out.' Our operating expenses are relatively low and should not exceed ½ of 1 per cent. of our available funds.

"Many of these stocks have been purchased at recent low prices and on a relatively high yield basis. The average current return at cost on our total investment—which include some non-dividend paying stocks—after Federal income tax at the rate of 12 per cent. per annum, is approximately 5.40 per cent."

Coty Earnings Greater

Coty, Inc., reports net income of $1,682,500 for the quarter ended September 30, excluding profits of foreign subsidiaries, compared with $1,528,000 for the corresponding quarter of 1928. The share earnings were equivalent to $1.14 for the 1929 third quarter, as against $1.03 for the similar 1928 period. For the first nine months of 1929 net income was $3,628,313, or $2.46 per share, as compared with $3,027,000, or $2.05 per share the first three 1928 quarters.

The above share earnings are based on 1,471,985 shares outstanding as of September 30, 1929. The proceeds of 103,773 of these shares, issued since the last quarterly statement, have been used in connection with the acquisition of interests in certain foreign companies, including the French City company. The above statement of earnings does not reflect any of the profits of the foreign companies so acquired.

At the time of reporting the above figures, J. F. Scanlan, general manager of Coty, Inc., made the following statement:

"From present indications we do not believe that our business will be adversely affected by the recent stock market decline, and feel that we have every reason to look forward to a continued increased demand for our products."

Vadsco Earnings Up 67%

Vadsco Sales Corp. report profit for nine months ended Sept. 30, 1929, of $1,278,927 after depreciation, etc., but before federal taxes, comparing with $762,293 in the first nine months of 1928.

For quarter ended Sept. 30, profit was $360,384 before federal taxes, against $219,595 in corresponding quarter of 1928. Capital stock consists of 76,578 shares of 7% convertible preferred stock and 1,021,573 shares of no-par common, to be outstanding when all subsidiary shares have been exchanged.

The Armstrong Cork Co. declared an extra dividend of 37½c, and a quarterly dividend of 50c. The latter declaration places the stock on an annual basis of $2, against $1.50 paid previously. In previous quarters extras of 12½c were declared.

American Home Products declared a monthly dividend of 35c, placing the stock on a $4.20 annual basis, against $3.60 paid previously.

Drug Stocks Reach New Low

The prices of common stocks of drug and cosmetics companies registered new low prices for the year during the week of November 14, the index of the Standard Statistics Co., New York, being 158.8 for that date, although drug stocks as a whole held up better than the general list of industrials which reached 134.5 on the same date. Detailed figures on the drug index and index for 339 industrials follows:

		1926 equals 100	
		Drugs and Cosmetics	*339 Industrials*
Dec.	5	176.9	150.8
Nov.	27	175.2	145.5
	21	176.0	150.5
	14	158.8	134.5
	7	185.5	148.6
1929	High	260.6	218.9
	Low	158.8	134.5
1928	High	264.3	186.4
	Low	166.8	132.5

Hires Earnings Jump

The Charles E. Hires Co., Philadelphia, reports for their fiscal year ended Sept. 30, 1929, net profits of $619,820.69, after all charges and Federal income taxes. This is at the rate of $7.29 per share on A stock, and is a 50% increase over earnings of $414,161.97 for 1928, which in turn was an 85% increase over earnings of $224,854.18 for 1927. Surplus account as of Sept. 29 stands at $1,313,036.75, and total sales for the year were equivalent to 885,000,000 glasses or bottles of root beer.

New Stearns Directors

Frederick Stearns & Co., Detroit, at a meeting of the directors held Oct. 22, elected Wesson Syeburn and Wm. H. Lalley to the board, and at a meeting October 31, Howard Bonbright was added to the directorate.

Mr. Seyburn is a director of the Peoples Wayne County Bank of Detroit, and was recently made a director of Detroit Banks, Inc. Mr. Lalley is a director of the Bank of Michigan, and Mr. Bonbright a director of the Guardian Bank and the Guardian Trust Co. of Detroit.

Zonite Earnings Up 156%

Zonite Products Corp. for nine months ended on Sept. 30, report earnings equivalent to $1.31 a share on 688,300 shares of stock outstanding, against earnings equivalent to 51c a share in the corresponding period last year. Figures for this year do not include earnings of the A. C. Barnes Co. or the Forhan Co.

American Com. Stock Dividend

American Commercial Alcohol Co., it is reported, will declare a stock dividend of two per cent. With this melon the stock, at its present price, sells to yield better than 10 per cent.

American Commercial Alcohol is the second largest company in its field and its earnings have been increased considerably of late, it is stated, because of its recent absorption of several companies.

For the ten months ended October 31, Neet, Inc., reports net earnings of $360,940, equivalent to $6 a share on 60,000 class A shares, against $174,698 in the whole of 1928.

Drug Industry Stocks

1929 Nov. 30th Bid	1929 Nov. 30th Asked	1929 High	1929 Low	1928 High	1928 Low	Sales in Nov.	Sales from Jan. 1.1929 to Nov. 30th	ISSUES	Par $	Shares Listed	An. Rate	Earnings $-per share-$ 1928		1927
								NEW YORK STOCK EXCHANGE						
242	245½	354½	197	252½	146	125,020	974,020	Allied Chemical	No	2,178,109	$6.00			10.03
110⅜	114½	184½	86	117⅝	70½	817,000	3,200,900	American Can	25	2,473,998	3.00			4.11
140	140½	142	133½	147	136½	5,800	43,800	pfd	100	412,333	7.00			31.66
39	40½	81⅛	27	50½	44	65,700	511,900	American Chicle	No	373,190	2.00	9 mo.	6.48	41.04
...	...	...	...	114	107			pfd	No	33,200	7.00	9 mo.	42.13	6.78
27½	28½	55	20	55	43½	58,800	404,300	American Comm'l Alcohol	No	77,000	.....	3 mo.	2.66	
54	58	85⅛	40	86	59	56,700	393,730	American Home Products	No	534,000	3.00	6 mo.	2.52	3.67
...	...	...	...	83½	70½		35,700	Certo Corp	No	300,000	3.00	9 mo.	5.19	3.87
15	15½	23½	12	36	20	7,800	198,100	Container Corp. Class A	20	271,189	1.20	9 mo.	1.46	2.26
5⅛	5½	11¼	3⅛	19½	9⅜	19,600	281,100	Container Corp. Class B	No	568,289	.60	9 mo.	0.73	1.13
50	51⅜	92	40½	128⅛	53	224,100	1,162,200	Continental Can	No	*710,000	*5.00	8 mo.	7.61	7.21
...	...	126	115	128	123	1,130	2,710	pfd	100	51,125	7.00	8 mo.	111.39	86.82
87	88¼	126⅛	70	94	64⅜	145,900	2,303,000	Corn Products	25	2,530,000	2.00	9 mo.	3.00	3.50
140	140½	144½	137	146½	138½	2,820	27,740	pfd	100	250,000	7.00	9 mo.	35.63	42.40
27½	28⅜	82½	20½	89½	62⅜	158,900	2,695,000	Coty, Inc	No	1,471,985	†2.00	9 mo.	9.23	10.80
77	79	126½	69	120¼	80	132,300	1,043,200	Drug Incorporated	No	2,183,990	4.00	8 mo.	3.60	11.47
50⅛	53⅞	79⅛	40	84	64⅛	34,600	176,200	Household Products	No	575,000	‡4.00	6 mo.	2.64	5.22
10	12½	23	10	27½	13½	23,500	83,900	Kresge	10	3,678,720	‡1.60	9 mo.	2.76	3.76
63	65	65¼	76	118	110½	570	4,420	pfd	100	20,000	7.00	9 mo.	512.30	698.85
98⅛	100⅛	157½	80⅛	136⅛	79⅛	135,400	2,743,000	Lambert Co	No	571,906	‡6.50	9 mo.	6.62	6.23
33	33½	68½	28	64⅜	38	29,900	478,900	Lehn & Fink	No	295,000	3.00	6 mo.	3.25	4.32
32½	33	59	21½	50⅜	45½	10,600	2,793,700	McKesson & Robbins, Com	No	664,409	1.60	4 mo.	1.42	0.91
46½	46½	63	40	63⅛	54	8,900	139,100	pfd	50	315,086	3.50	4 mo.	4.15	8.94
37½	39⅜	72⅛	29	190	117½	125,500	914,080	Monsanto Chemical Co	No	310,852	1.25	9 mo.	6.30	6.11
...	...	80½	47	...	...	1,800	9,100	Mathieson Alkali	No	147,207	6.00	9 mo.	9.54	10.93
53	54	89⅛	43	95½	74½	16,400	206,200	Owens-Illinois Glass Co	25	768,860	4.00	9 mo.	4.13	5.37
25	25½	87½	23	56⅜	47½	11,200	334,900	Park & Tilford	No	200,000	3.00	9 mo.	5.09	3.70
37	37⅜	82½	35	91	52	510	4,620	Prophylactic Brush	No	100,000	‡4.00	6 mo.	2.47	6.18
...	...	...	...	...	...			Rossville Com'l Alcohol Corp	No	120,000	.....			
8	8½	41½	8	...	...	70,800	1,144,600	Schulte	No	1,121,667	3.50	6 mo.	1.99	4.90
...	...	22	19½	67½	35½	100	3,500	Sharp & Dohme, pfd		162,500	3.50			
6	10	22½	5½	23⅜	11⅛	6,900	158,700	Sweets Am	50	100,000	1.00	9 mo.	0.97	0.47
134	139½	243⅛	95	138	102½	216,600	2,024,400	U. S. Ind Alc	No	240,000	6.00	6 mo.	3.90	7.26
...	...	...	...	125½	118⅛		880	pfd	100	60,000	7.00	6 mo.	19.12	36.03
4½	5½	13½	3	...	...	39,400	175,900	Vadsco Sales		1,021,573				
35	35½	51⅛	33	85	58	33,000	541,000	Vick Chemical Co	No	400,000	4.00		6.06	5.36
73½	76½	103½	52½	225½	175½	343,700	2,113,300	Woolworth, F. W	25	3,900,000	6.00			9.06
67½	70	80¼	65	84	68	15,300	193,700	Wrigley	No	1,800,000	‡3.50	9 mo.	4.38	5.43
								NEW YORK CURB						
...	...	37	10½	28½	11¼	3,000	183,900	Amer. Sol. & Chem. Corp., V.T.C.	No	160,000	.....		1.58	0.17
30½	31	42½	25½	47½	25½	2,400	93,200	Con. Partic pfd	No	100,000	$3.00		4.00	3.17
...	...	210	130	...	...	100	800	Ches. Mfg. Co	25	120,000	.....			8.49
56	58	90	40	92	75	8,500	56,300	Colgate-Palmolive-Peet Com	No		2.00			
...	...	100	96	...	...	500	900	pfd	No		6.00			
...	...	57½	2	57½	56	1,000	27,400	Davis Drug Stores Allot. Ctfs	No	100,000	.....	7 mo.	6.71	5.02
8½	6?	26½	3½	...	...	5,900	71,100	Helena Rubenstein		135,000	.....			
21	21	41¼	17½	23	7½	1,400	19,210	Heyden Chemical Corp	10	150,000	.....			1.02
...	...	...	...	...	...			May Drug Stores	No	200,000	1.50		1.38	1.82
50	50	67½	40	72	50½	1,700	36,200	Mead-Johnson	No	165,000	3.00	6 mo.	2.94	6.33
...	...	12	1⅞	28½	10½	200	5,320	Nauheim Pharmacies Com	No	90,000	.....			3.03
1½	2	32½	6	37½	20½	800	7,010	pfd	No	45,000	2.50			8.56
...	...	58½	44¼	55	38	3,500	51,606	Parke Davis & Co	No	4,747,829	1.00		1.73	1.54
...	...	94	45	91	48	1,100	59,550	Peoples Drug Store	No	122,250	1.00			3.31
...	...	97½	81½	300	247		27,325	Proctor & Gamble	20	1,250,000	8.00		11.96	11.38
...	...	30	16½	...	...	4,400	4,400	Sharp & Dohme, Com						
...	...	...	...	...	...		307,400	Standard Brands, Inc						
...	...	24	10⅜	...	...	1,400	85,900	Stein Cosmetics						
55	64½	107½	35½	102½	37½	17,800	218,500	Walgreen Co. Com	No	766,354	.....	9 mo.	2.17	1.59
19	21	44¼	13	48½	27	36,900	248,200	Zonite Products Corp	No	176,000	.....		6 mo.	0.98
								CLEVELAND						
...	...	80	60	112½	25	1,041	2,994	Dow Chem. Co	No	120,000	6.00			
...	...	107½	100	107	103⅜	326	1,124	pfd	100	30,000	7.00			
...	...	42	20	30	24	485	12,095	Miller Wholesale Drug Com	No	17,000	1.60			
...	...	51	24	24	21¼	322	14,397	Weinberger Drug, Com	No	20,000	.....	9 mo.	3.51	1.35
								CHICAGO						
37¼	38½	52	36	...	...	2,300	43,950	Abbott Laboratories	No	120,000	2.00			
6	6½	29½	2	31½	21½	4,450	102,495	Lane Drug Co., Com	No	90,000	.....	7 mo.	1.47	3.13
16	16½	32	14	51½	23	4,300	42,110	Cum. pfd	No	65,000	.....	7 mo.	3.20	6.34
								CINCINNATI						
17	17½	41½	16	...	...	1,226	8,822	Dow Drug Co	No	90,000	1.00			
...	...	...	...	...	...			pfd	100	4,000	7.00			
								UNLISTED						
...	...	...	...	...	...			Heyden Chemical Corp., pfd	100	3,100	7.00			56.18
65	72	...	...	...	...			Merck Pfd	100	33,950	5.00			
...	...	...	...	...	...			Mulford, H. K. & Co	100	30,154	3.00			
...	...	...	...	...	...			Noxzema Chem. Co			.....			
...	...	...	...	...	...			Squibb Com	No	411,778	.....			1.69
...	...	...	...	...	...			pfd	No	63,888	6.00			16.92

*Before giving effect to 100% stock dividend.
†Before giving effect to 300% stock dividend.
‡Includes extras.

Violets in Grasse

IN GRASSE and the surrounding region violets are sold to the distilling perfumers from the month of January to April, but the crop for the florist trade commences in October-November, depending upon weather and other conditions. A large number of varieties grow wild in different parts of France, but the one of interest to the perfumer is the so-called *Viola Odorata*, with the double Parma violet heading the list. The Parma violet (*Viola Parmensis*), descended from the violet of the four seasons (*Viola Odorata semperflorens*), differs in that it has shiny leaves of a gray green, highly perfumed flowers with a longer peduncle, and a large double corolla of a grayish blue. It is more delicate, suffering from the cold and fearing droughts, as well as being unable to withstand the direct rays of the sun. Some fifty years ago in the district of Hyeres, also famous for its violets, only the violet of the four seasons, known as the *Violette de la Valette*, was known. La Valette, by the way, is a small place in the vicinity of Toulon, where this violet was first exploited in about the year 1875. In 1865, Vence and the surrounding country already produced some 80,000 kilograms of Parma violets for the distilling perfumers of that time. It was towards 1870 that the culture was taken up in the Grasse district. Sections most favorable to this flower are: Vence, Grasse, Tourette, Le Bar, Peimaynade, Nice, Menton. In 1918 the annual figure reached by the distilling perfumers of Grasse is placed at 300,000 kilograms of flowers treated. This is particularly interesting when considering the fact that, due to the unusually cold winter, there were practically no Parma violets treated in 1929 by the distilling perfumers of Grasse.

The perfume of the violet is admittedly among the more popular perfumes demanded by the public. It enters into the preparation of extracts, bouquets, cold creams, lotions, powders, soaps, and so on. Homer, Pliny, and other of the ancients, stated that the violet was one of the perfume-flowers which pleased the most. The Greeks had a custom of perfuming their wine with violets. It is also said that this mild and discreet perfume "is suitable for young girls;" that it holds a mystic charm and leads one to devotion. Some persons, apparently, cannot tolerate the violet odor, experiencing a certain breaking in their voice. The duchess of Lamballe, for example, could not support the perfume of the violet. At the time of Marie Antoinette the violet and the rose were the favorite perfumes. And in the language of the flowers the double violet represents reciprocal friendship; the white violet innocence; the yellow, faded beauty;

Gathering Violets under the Olive Trees

and a bouquet of violets surrounded by leaves, hidden love. To-day the confectioner takes the violet petals and candies them, these being eagerly sought after by the *gourmands*.

In the Grasse region violets are, as a rule, grown under the protecting shade of either the olive or the orange trees. The accompanying photographs give an excellent idea of just how the violet grows in this district, and how it is gathered. Gathering of the violet is effected twice a week during the season, and the flowers must be cut without peduncle. It is interesting to note, therefore that 1,000 flowers weigh on an average 250 grams, which means that 1 kilogram sets a requirement of 4,000 flowers. The gatherers begin their work either in the morning, directly after the dew, or in the evening. It is a long and comparatively costly process, one woman gathering about 3 to 6 kilograms in a day of 10 hours, depending upon the abundance of the crop and her natural gathering ability. A hectare of violets in the third year of growth, if in normal condition, should, it is estmated, produce anywhere from 1,400, to 2,000 kilograms. A thousand bunches of violets having a diameter of 25 to 35 centimeters are calculated to give 20 kilograms.

Violets, in order to secure the best possible essential oil, must be sent to and treated by the distilling perfumers as soon as possible after being picked. For the purpose of doing away with the disadvantage of great distances from the plantations to the perfumers' places of business, so-called *comissionnaires*, or middle-men, gather up the various yields in certain districts, and they in turn selling to the distilling perfumers of Grasse. This system, naturally, obviates a great deal of waste which would otherwise exist if each of the growers was to take his own small crop of violets to Grasse for treatment.

The violet is a comparatively delicate flower to handle, and the method frequently used by those who wish to secure the best results is that known as *enfleurage*. This system of treatment, used in connection with the jasmine and tuberose, two delicate flowers, is, perhaps, the oldest in existence. Many of the distilling perfumers maintain that it is only by the *enfleurage* method that satisfactory results can be attained with delicately-natured flowers like the jasmine, tuberose and violet. As explained in an article on jasmine recently, it simply consists in placing the flowers themselves in contact with especially purified fats, these fats absorbing the perfume of the flower. The resulting pomades are then treated in various ways in order to extract for practical purposes the perfume they hold. In the case of the violet, many have complained that such pomades do not give to the manufacturing perfumer an absolutely true violet odor. Authorities on the subject admit that this may be true if the *enfleurage* process has been improperly carried out, but that if, on the contrary, the fats used have been thoroughly purified and the

pomades allowed to age over a period of several months, excellent results should ensue. At any rate, every manufacturing perfumer who has worked with the so-called natural violet, or violet absolutes, knows that the violet odor becomes a fact only after the proper dilution has been effected. The volatile solvents method is also being employed successfully by some of the distilling perfumers, thus cutting down the costs of production.

Efforts have been made from time to time to successfully raise violets in the French colonies of Northern Africa, but without any satisfactory results. The reason for such failure is the fact that practically the entire family of violets cannot tolerate the direct rays of the sun, or a dry heat of long duration. Those violets which are grown in sections like Grasse, under the olive or orange trees, are most sought after because of the fact that they are literally laden with perfume.

In addition to the violets grown for the perfume industry, there are, of course, many varieties that find their way into the hands of the florists. These include such as the Victoria, the Prince of Wales, the Czar, the so-called Luxonne, and many others. For a number of years now the distilling perfumers have also been treating the Victoria, which during the 1929 season also suffered very much from the cold spells which visited the region of Grasse last winter. To give the reader an idea of just what the cold and snows meant to this district, said to be blessed by the gods, we are publishing a photograph taken near Grasse of a group of olive and orange trees covered with snow. And with this illustration in mind it is certainly not difficult to form an impression of why the yields on both the Parma and Victoria violets during 1929 were practically non-existent, with the exception of plantations under the protection of individual distilling perfumers. What the results will be for the year 1930 is, of course, a matter of conjecture at the present time, although every indication now points to a satisfactory season, particularly if the weather remains favorable during the vital period: January to April.

American Castile Soap Producer

McCullough Laboratories, Inc., 190 King st., Brooklyn, N. Y., has, within the past month, placed in production a modern plant for production of "La Rita" castile soap, U. S. P., which was formerly produced by G. B. McCullough & Co., Chicago.

Castile soap, U. S. P., which must now be made only from olive oil and caustic soda, is now being shipped by the company in powder, chip and granular form. On Jan. 1, 1930, the company will be ready to ship soap in cases containing 10 bars of soap.

The sales office of the company, located at 11 Cliff st., New York, is in charge of V. P. McManus, vice-president and general sales manager.

Sherwood Petroleum Co. Inc. have issued a new booklet entitled "The Proper Petroleum Products for the Drug and Cosmetic Trade." This will be gladly furnished to any one interested.

No Castoreum Auction

Keen disappointment has been felt by the trade at the decision of the Hudson's Bay Company not to hold the usual annual sale of castoreum this year, says "Chemist and Druggist," London. The withdrawal of this auction is to be much regretted, as it appears likely to result in the severance of yet another link with the past. This annual auction has been regularly held in London for the past generation, and although the value of the castoreum offered may total only £5,000 to £6,000, the interest evinced by the various buyers has been remarkable. The Hudson's Bay Co., whose reputation alone is a reminder of the pioneer days of British commerce, are always scrupulously fair in the method of auctioning their produce. Generally speaking, the broker is always willing to sell the castoreum without a price limit, providing there is reasonably fair competition from bidders; therefore, it frequently happens that a buyer has not the slightest notion as to whether the prices for Pile I will open at, say, 60s. or 90s. per lb. It will be recollected that in last year's auction the opening prices for the different qualities were in some cases almost doubled, when the later lots catalogued were sold. It was this feeling of uncertainty which fascinated buyers and made the auction such an interesting annual event. We understand that the decision of the Hudson's Bay Company was only arrived at after the most careful consideration of the various circumstances that had arisen. Briefly, it appears that in recent years considerable difficulty has been experienced in purchasing from the trappers the beaver skins with the attachment of the castoreum. The present-day trapper is a distinctly different person from the trapper of former days, who was only too willing to engage in the barter trade, and would sell his collection of skins for so many cases of provisions or trinkets, etc. Nowadays, the trapper knows full well that the castoreum has been realizing very high prices, and therefore he wants more money for the fur skins accordingly. This attitude on the part of the trapper has forced the Company to try to stabilize prices. With this object in view, the Hudson's Bay Company have ceased the importation of the original pods, but in place have manufactured an extract at the source of origin of the whole of their supplies. Unfortunately for them, this extract is not looked upon with any favor by the trade, and very little, if any, has been sold either in this country or on the Continent; the price asked for this extract is stated to be 280s. per lb. On this account, the demand for the stocks in dealers' hands has been very persistent during the past few weeks, and, as a result, prices have considerably advanced. It would appear that the small quantity now in this market is practically all held by one dealer, and on this account it is more than likely that the present high prices will further advance in the event of the principal Continental consumers deciding to make further purchases. In

conclusion, it may be of interest to point out that immediately following the war period there was a great slump in values, owing to the almost entire absence of the Continental demand, and, for instance, pickings were actually sold down to 5s. per lb.; against this, the highest price on record for this grade, viz., 190s. per lb., was paid in the auctions held in December, 1910.

More Toilet Goods Exported

Exports of American toilet preparations and fancy soaps for the first nine months of 1929 were valued at $8,528,000 against $8,130,000 for a similar period of 1928. From the accompanying table, it will be noted that shipments of all the various classifications that make up toilet preparations experienced an advance with the exception of perfumes and dentifrices.

As has been often stated, the establishment of branch factories in foreign countries continued to affect the export figures of dentifrices. Of the $1,904,000 worth of toilet soaps exported, $400,000 consisted of shaving soaps, powders, and creams. The following table shows the value of toiletries exported during the period under discussion:

	1928 (9 Months) Value	*1929 (9 Months)* Value
Perfumes and toilet waters	$343,000	$273,000
Dentifrices	2,203,000	2,148,000
Talcum, face, compact and bath powders	1,158,000	1,225,000
Creams, rouges and other cosmetics	1,350,000	1,561,000
Toilet and fancy soaps	1,794,000	1,904,000
Other toilet preparations	1,283,000	1,417,000
Total	8,130,000	8,528,000

The figures above do not include exports of these products to Alaska, Porto Rico, and other noncontiguous territories. The value of exports of American toilet preparations for the past five years to all countries and noncontiguous territory have been $10,505,000, $11,797,000, $12,502,000, $12,944,000, and $12,367,000 respectively.

Austrian Toiletries Market

Toilet preparations are manufactured in quantities more than adequate for covering the Austrian demands, with a considerable surplus remaining for export. Local production satisfied the demands of persons of limited income, while in common with the world conditions in this commodity foreign expensive perfumes and toilet articles find a market regardless of higher prices.

Several American manufacturers have succeeded in introducing their products on the Austrian market but up to the present time the turnover has not assumed very large proportions. During 1928, their purchases amounted to $32,000. The high import duty assessed on toilet preparations constitutes a handicap for the importer.

Distributors in Austria are accustomed to grant long credits to retailers and in turn ask such terms of the manufacturer. A liberal credit policy, they believe, will prove profitable in increasing trade even though prices must be slightly increased to cover the cost of financing. Importers usually prefer to have prices quoted c. i. f. European port, such as Hamburg, Bremen, or Trieste; if this is not practicable, they prefer quotations f. o. b. steamer New York. (Consul John P. Hurley, Vienna.)

Robert and George Fries, of Fries & Fries, Cincinnati, have disposed of their interest in Fallis, Inc., manufacturers of the Peter Pan toilet preparations, to Cosmetics & Drugs, Inc., New York.

Commercial Utilization of Java Citronella Oil

The purpose of the study was to determine the possibility of making high class perfumes from Java citronella oil. The properties of the oil that was experimented with are described in considerable detail. The first series of experiments was concerned with the separation of citronella and geraniol from the oil. This was done with the aid of sodium bisulphite. The average yield of citronella obtained was about 43 per cent. of the weight of the crude oil. The geraniol was extracted by means of anhydrous sodium sulphate and calcium chloride to the extent of seventy per cent. of the theoretically possible amount.

The citronella was reduced by means of iron and acetic acid as well as by means of sodium amalgam and acetic acid and by electrolysis. It is concluded that the use of iron and acetic acid could not form the basis of a commercial process for the reduction of citronella and the production of citronella. The sodium amalgam process gave good results. Experiments were also carried out with the aid of aluminum amalgam. Difficulty was encountered due to the oxidation of the stips of amalgam by air and this was overcome by enclosing the amalgamated strips in a cage made from strong iron netting of fairly fine mesh. Good results were also obtained by the electrolytic method. By using a high current density and decreasing the time of electrolysis, the amount of isopulegol obtained was decreased. Better results were also obtained by increasing the cathode surface, and by substituting thin plates of lead for the mercury. It was found however that the acid formed in the anodic compartment diffused into the cathode space and exerted a deleterious action on the citronellal. This was overcome by the use of a dilute solution o sodium hydroxide as the electrolyte. The authors also describe the production of acetates of geraniol and citronella. B. O'Donoghue, J. Drum and H. Ryan, "Scientific Proceedings of the Royal Dublin Society," volume 19, pages 113-120.

Caucasian Eucalyptus Oils

A sample contained five per cent. of alpha-pinene, 82 per cent. of cineol, two per cent. of aldehyde, 5.5. per cent. of alcohols and globulol. Oil from leaves of eucalyptus pulverulenta, Sims., contained eight per cent. of alpha-pinene, 78 per cent. of cineol about five per cent. of aldehyde and about thirteen per cent. of alcohols. Oil from eucalyptus viminalis, Labill., contained about five per cent. of dextro-alpha-pinene, 65 per cent. of cineol, four per cent. of aldehyde, ten per cent. of eudesmol and eleven per cent. of other alcohols. Oil from Eucalyptus maideni contained about three per cent. of alpha-pinene, 64 per cent. of cineol, three per cent. of normal and isovaleraldehyde, eight per cent. of alcohols and five per cent. of eudesmol. B. N. Rutovski and I. V. Vinogradova, Trans. "Sci. Chem. Pharm. Inst." Moscow, 1927, number 17, pages 39-68.

Para-Phenylenediamine Derivatives as Hair Dyes

Various derivatives of para-phenylenediamin are described, such as para-toluylenediamin, para-aminodiphenylamin, phenylenediaminsulphonic acids, etc. Methods are given to remove the injurious basicity of the diamine. The choice of acid substances used for this purpose is highly important, for the use of certain substances or too large an amount of others will destroy the coloring properties of the dye. New hair dyes made from para-phenylenediamin are also described. Dr. Hans Meyer, "Chemiker Zeitung," 1929, pages 765-766.

Medicinal Ingredients of Toilet Powders

By J. Augustin*

FACE powders, dusting powders and powdered rouges in addition to taking the shine off the skin or modifying its color often have a very definite place in preventing injury to the skin and in avoiding excess perspiration. They are often used to relieve skin irritations and to protect the skin from harmful effects of light, etc. Accordingly, the base of the powder, which is prepared from well-known pulverized materials such as talc., etc., generally contains certain added substances of the type that is often used in preparing skin creams, and salves. The most common of these materials are boric acid, tartaric acid, salicylic acid, benzolic acid, tannin, borax, and sodium benzolate. Fatty substances are preferably used with the exceptions of the triglycerides which quickly become rancid in the powders. Such fatty substances are best vaseline, vaseline oil, wax, spermaceti, lanoline, paraffine, and ceresin. Other substances that are added include quinisol, sulphur, paraformaldehyde, aluminum salts, sodium perborate, menthol, salol, camphor, witch hazel extract, peru balsam, ammonium sulphoichthyolate and anaesthesin, etc. All sorts of powders of pulverized materials with the exception of flour and starches can be used as the base of these powders, but talc is most frequently employed.

Proper Mixing Vital

The mild and prompt action of the ingredients of the powders depends on their use in correct proportions and on their proper mixing together. As far as the solid ingredients are concerned it suffices to pulverize them finely and then to distribute them by mixing and passing through screens. A final mixing is also necessary. In this way ingredients are mixed and rubbed together with approximately twice the amount of the powder.

This mixture is then well distributed throughout the rest of the powder. It is advisable to triturate the first trituration with a larger amount of the powder and then make up the final mixture. When pulverized ingredients are mixed with the powder, it is immaterial whether these ingredients are first mixed with a portion of the powder, or with an ingredient of the powder, such as kaolin talc, calcium carbonate and the like, which can be triturated without forming large pieces. The successive steps in the mixing process must be carried particularly when a small amount of an active ingredient has to be mixed with the powder. Thus it sometimes happens that anywhere from half to two per cent. of the ingredient is mixed with the powder. In such a case the mixing must be done according to the technic described above if a desirable result is to be obtained.

Action is Concentrated

If it happens that the concentration of the active ingredient is too great in a portion of the powder due to improper mixing, and at the same time too low in another portion, then the powder will act too strongly at one time or not have sufficient action in another case. On the other hand, when the amount of the ingredient that must be mixed with the powder amounts to as much as ten per cent. or more as for example in the case of boric acid, then the mixing does not have to be carried out in a number of steps; a single, careful mixing suffices. It must however always be borne in mind that the individual particles of the ingredient, even when they are well distributed throughout the powder, are actually present in a concentrated condition, so that they have a strongly aggressive action as concentrated material on the tiny portion of the skin with which they come in contact. Whenever it is possible, an effort should be made to obtain a milder effect. This can of course be accomplished by dissolving the ingredient in quite a concentrated state in a volatile solvent, such as water, alcohol, ether or acetone. The solution is then mixed with kaolin or calcium carbonate and finally made into a paste with so much calcium carbonate or kaolin, which is plastic and almost crumbly. This paste is then spread in thin layers on plates and dried at a temperature of approximately 50 to 70 degrees C. The fire hazards of using alcohol, and still more of using ether and acetone must be taken into consideration. Only such ingredients, which are not decomposed by heat and by being dissolved in the solvent, are suitable for treatment in this manner. For example such ingredients as sodium perborate, menthol and the like are not suitable. After drying the mass is cooled off, rubbed into a powder and then mixed with the rest of the powder.

*Der Parfuemeur, 1929, 82-83; 85-86.

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The finest sort of distribution is secured in this manner, which resembles a solution or at least a colloidal dispersion, for example in the case of the solution of Peru balsam in alcohol, which is then mixed with the powder, dried and triturated. One per cent. of gum benzoin, which is mixed with the powder in this fashion, acts better and milder than three per cent. of the substance added in the powdered form. Boric acid, dissolved in hot water, can be worked up in the same manner and the powder can then be truly designated as being impregnated with boric acid.

Distribution of Fats Difficult

A difficult problem is uniform dispersion of fatty substances, such as lanoline, vasoline oil, vaseline, wax and spermaceti with the powder. According to the primitive method, vaseline oil, for example, is triturated with a portion of the powder, then passed through a fine screen, triturated with additional powder, passed again through a screen, until, after much time and care, a product is obtained which is not exactly seemly. A similar product is obtained when wax or spermaceti is pulverized as finely as possible (this is quite a difficult operation and can be obtained in best manner by using an impact grinder), and when the mass is then mixed with the original powder. Grinding is better done when the wax is melted and then mixed while still warm with as much kaolin and calcium car bonate as possible. The mixture is then cooled off and ground.

Mixing the Lanoline

Lanoline can be used in two ways. It can be cooked with vaseline and wax to form a water-containing lanoline salve, and then the salve is triturated with the powder and the water content is removed by drying. Then again the lanoline may be dissolved in a little acetone, the solution mixed with powder and dried so that the acetone is removed. (It is claimed that the best way in which these substances can be mixed into the powder is by the use of a waxy substance, known as Tegin, which gives an extremely stable emulsion with water).

Thus for example for obtaining a powder which contains lanoline, vaseline and wax in the state of extremely fine dispersion, fifteen parts of Tegin are mixed with ten parts of vaseline and five parts of wax and melted and then mixed with one hundred parts of water at a temperature of 75° C. The resulting emulsion is then mixed with 150 to 200 parts by weight of kaolin or talc. The plastic mass is then dried at moderate temperature in thin sheets, cooled off so that it hardens properly, is ground and then passed through a screen with some untreated powder. The powder thus obtained is well mixed with the rest of the powder. Tegin can be used alone for admixture with the powder to obtain a product which has a mild cosmetic action and which has a fine feel and sticks well.

Grease powders will first be discussed. It is wrong to designate powders which are mostly prepared from talc as grease powders. Only powders, which contain fatty and waxy substances, are correctly designated as grease powders. A simple method of preparing these powders consists in mixing as finely pulverized spermaceti as possible with the powder. Furthermore, vaseline, lanoline, wax and the like are worked up in different ways. Different methods used for this purpose have been described above. A good example of a powder which is similar to the vaseline oil powder is made in the following manner. Two hundred parts by weight of lanoline salve are mixed with seven hundred parts of zinc oxide and one hundred parts of talc. The lanoline salve is prepared from five hundred parts by weight of yellow vaseline, two hundred parts by weight of wool fat, fifty parts by weight of wax and 250 parts by weight of distilled water. The mixture is made at an elevated temperature.

Baby Talcums

Baby talcum powders belong for the most part to the class of grease powders. A good formula for such a powder is the following:—thirty parts by weight of adeps lanae, about fifteen parts by weight of ether, 125 parts by weight of magnesium carbonate, fifty parts by weight of boric acid, 792 parts by weight of talc, one part by weight of bergamot oil, 1.5 parts by weight of lavender oil and wool fat. The entire mixture is melted, dissolved in ether and then the solution is triturated with 250 parts by weight of talc. After the ether has been permitted to evaporate, the remaining ingredients are gradually triturated with the mixture. The ingredients are then thoroughly mixed together, and then the powder is forced through a screen.

A baby powder and also a grease powder can be made with the aid of Tegin cream which contains fatty substances. The Tegin cream is first prepared from five parts by weight of Tegin, five parts by weight of vaseline oil, two parts by weight of wax, two parts by weight of lanoline and eighty-five parts by weight of water. This cream is then mixed with two hundred parts by weight of powder. The mixture is then worked up in the usual manner.

Perspiration Powders

Powders for removing perspiration are to be considered next. These may be used on the feet, hands, shoulders and body. The reader is referred to an article by H. Schwarz in "Parfuemeur," number 28, year 1928 if he is interested in powders that are used for preventing excessive perspiration. There it is recommended that the anti-sweating powder should be washed off each day with the aid of a superfatted salol, thymol or benzoin soap and thereafter the part of the body on which the powder has been used

should be rubbed with rubbing alcohol. Some good formulae for preparing these powders for use to prevent excessive sweating are given in the following tabulation:

	Hand Sweating powd.	*Foot Sweating powd.*	*According to H. Schwarz*	*Powder for use on shoulders*	*Ditto*	*Ditto*	*Misc.*	*Misc.*
Salicylic acid		5		1	0.5		100	4
Tartaric acid		10		3	0.5			
Boric acid		10	10	3	10			10
Tannin			5			100		
Borax						200		
Paraformaldehyde			3					
Zinc oxide		40		45	20		400	
Violet root powder				45				
Talc		40	25		40	600	1500	60
Kaolin							300	
Magnesium carbonate			12				200	6
Calcium carbonate			20					20
Quinine tannate		3						
Wheat or rice starch		15	25					

A milder, but nevertheless a uniform action is obtained with considerably smaller proportions of the active ingredients, when they are used in aqueous or alcoholic solutions and thus worked up with the powder mass. This is based on the condition that the solution of the active ingredient does not under any deterioration. The method which is used in making up the preparation is the same that has been explained above. The proportions of the ingredients can thereby be decreased to about one half or one third when they are used according to this method.

A simple powder which is used to counteract perspiration may be made up as follows:—two hundred parts by weight of boric acid, 1800 parts by weight of talc, two parts by weight of oil of lemon, one part by weight of lavender oil and 0.1 part by weight of bitter almond oil. A salicylic dusting powder may be prepared in the following manner:—97 parts by weight of talc, three parts by weight of salicylic acid and 0.2 part by weight of the same perfume composition as is used above. Boric acid can be used alone as a dusting powder and is very useful for this purpose. The dust powder may also be composed of a mixture of bismuth gallate ten parts by weight and talc one hundred parts by weight. Finally such a powder may also consist of ten parts by weight of quinine sulphate and one hundred parts by weight of talc.

Sunburn Powders

The following are interesting details regarding the preparation of powders for alleviating the effects of sunburn. For example five per cent. of basic bismuth nitrate are mixed with five per cent. of anaethesin or five per cent. of cycloform plus five per cent. of the finest pulverized boric acid or three per cent. of ammonium sulphoichthyolate and one per cent. of menthol. This mixture is then mixed with a powder, which consists of eighty per cent. of talc, ten per cent. of kaolin, seven per cent. of magnesium carbonate and three per cent. of vaseline oil. The powder is colored with one to two per cent. of a flesh color and a half a per cent. of alizarin lake dye, both of which colors are insoluble in water. The colors are mixed with one portion of the powder. Then the rest of the powder is mixed with the colored mass and the mixture is passed several times through a screen. The powder is then quite weakly perfumed by admixture of 0.1 per cent. of artificial rose oil or 0.2 per cent. of bergamot oil.

Powders are also prepared for protecting the skin against the action of light. They have for their purpose the absorption and thus the removal of the light rays, which lie for the most part outside of the visible spectrum (ultraviolet rays. The rays are made harmless by the action of the powder. It is known that when the skin is very sensitive to light or is grossly exposed to it (this really means exposure to the sun's rays and sunburn), the skin becomes red and inflamed and in fact quite serious conditions may arise. The skin protects itself against the action of the light rays by accumulating in the skin cells a brownish pigment which is the sunburn. When the exposure is too severe, then this protection does avail in all cases, and if protection is to be secured, it is essential to use substances which will literally swallow the ultraviolet rays. Such substances are fluorescent materials such as Askulin, quinine acid sulphate, sodium alphanaphthylaminesulphonate, salol. However, these substances develop their fullest effect only when used in solution form, that is in solution in water, oils or alcohol. Hence, their incomplete action in the powder form is bolstered up by the additional use of brown (brownish red, not brownish black) pigments, which have likewise the property of ultraviolet rays.

The Use of Earth Colors

Such water-insoluble substances as pigments and earth colors, including reddle with yellow ochre, finest yellow ochre, paris red and other special pigments are well suited for this purpose. The brownish black pigments should not however be used. The action of these substances is increased by the admixture of brownish water-soluble colors, such as Rhodamin B plus Soap yellow. Likewise, tannin-containing vegetable powders and extracts such as witch hazel extract, oak bark extract and the like enhance the protective action of the powder.

The following formula is for the preparation of a powder of this character which cannot fail to act as desired:—one hundred parts by weight of magnesium stearate, six hundred parts by weight of talc, two hundred parts by weight of the finest elutriated kaolin, fifty parts by weight of precipitated light magneskum carbonate, thirty parts by weight of quinine bisulphate (quinine acid sulphate, twenty parts by weight of extract of witch hazel, thirty parts by weight of a proper brownish red pigment, ten parts by weight of dark Paris red and thirty parts by weight of a brown solution. The latter is prepared from thirty parts by weight of Rhodamin B and seven parts by weight of Soap yellow in six hundred parts by weight of alcohol and the same weight of water.

Body powders are used for powdering larger surfaces or the entire body and are intended for the purpose of absorbing the sweat, for preventing the irritation of wounds, for absorbing the water that remains adhering to the body after a bath so as to prevent chills and colds. The perfumes that are used for giving these powders a distinct odor must be selected with due consideration of the large amount of the powder that is used. The odor must be refreshing and not too noticeable. Colors and pigments are not used in making up these powders. A formula which gives a powder of this sort contains the following ingredients:—thirty parts by weight of starch, forty parts by weight of talc, twenty parts by weight of kaolin, five parts by weight of zinc oxide and the same proportion of magnesium carbonate. This mixture is prepared and then mixed with a solution of one part by weight of boric acid and 0.3 part by weight of borax in water. The powder may be perfumed with the aid of one to two per cent. of eau de cologne.

Bleaching powders generally owe their bleaching potency to the incorporation of either sodium perborate or sodium peroxide. These bleaching agents are stable for a comparatively long period of time in these powders. A formula of American origin which is claimed to give a very good powder of this sort contains fifty five parts by weight of talc, ten parts by weight of calcium carbonate, the same proportion of magnesium carbonate, five parts by weight of Zinc stearate, eight parts by weight of zinc oxide, eight parts by weight of zinc borate and four parts by weight of sodium peroxide.

A simpler formula contains the following constituents:—eighty parts by weight of talc, ten parts by weight of zinc oxide, two parts by weight of lactic acid, eight parts by weight of sodium perborate and one per cent. of lemon oil as the perfume.

A powder which can be used for counteracting redness of the face contains the following ingredients: seventy parts by weight of talc, ten parts by weight of zinc oxide, two and one-half parts by weight of precipitated sulphur and the same proportion of ichthyol.

Caron Denied "Chez Moi"

E. Daltroff & Cie, doing business as Perfumerie Caron, Caron Corp. of New York, was denied registration of the notation "Chez Moi" as a trade mark on pastes and powders for beautifying and preserving the teeth, skin and hair, and on perfumery. "Chez Moi" was held to be deceptively similar to "Chez Lui", the trade mark owned by the opposer, V. Vivaudou, Inc.

In reaching the determination as to the registrability of the notation, it was held that where an opposer to registration has a registered mark and other registered marks are cited by him, the fact that one such registration alleges an earlier date of adoption and use is not persuasive, since the eraliest date that could be given such registration is the date the application for it was filed.

The decision stated in part that, "appearing upon the same class of goods in the same market, it is quite evident that to those unfamiliar with the French language the marks would be confusingly similar."

Cuban Demand for Toiletries

Perfumes and beauty preparations are, in general, in popular demand in Cuba, once their quality and good results have been established, Cubans are generously in the use of perfumes and their allied products as aids to personal hygiene, regardless of their economic condition.

One strong factor influencing the ready sale of beauty products is that, owing to the debilitating effects of the climate and to the nature of the foodstuffs, many women suffer from certain internal affections which produce facial eruptions, such as pimples and rash, and these women will spare no effort to improve their appearance. To this end, they employ a variety of toiletries such as soaps and creams, and usually with good results when articles of high quality are used. However, this phase of the trade has been exploited to some extent by imitative and unscrupulous manufacturers whose activities naturally tend to prejudice the public against such articles. Another factor, if not the most important, which aids the ready sale of perfumes and beauty preparations, is the instinctive desire of the Cuban women to appear in public well groomed. (Consul Horace J. Dickinson, *Antilla.*)

Exports of toilet preparations to Cuba from U. S. during the past two years and the first six months of 1929 were valued at $684,000, $318,000, and $122,000, respectively.

Toilet Preparations Imports Up

Imports of toilet preparations for the first nine months of the current year were valued at $5,316,000, against $4,839,000 for the same period of 1928. Imports for September, however, were valued at only $474,000, against $539,000 for September, 1928. The following table shows the details:

	1928 (9 Months)		*1929 (9 Months)*	
	Pounds	*Value*	*Pounds*	*Value*
Soap:				
Castile	2,351,478	$296,838	2,626,739	$304,542
Toilet	1,446,829	414,405	1,502,769	477,622
All other	1,470,727	152,252	1,008,554	149,164
Perfume materials	10,251	2,405,556	7,962	2,636,997
Cosmetics, powders, creams, etc.	.....	549,505	.....	709,746
Perfumery, bay rum, and toilet waters	.....	1,019,985	.....	1,037,672

The amount of castile soap remaining in bonded warehouse on August 31, 1929, was 606,000 pounds.

Hair Wash Containing Cholesterin

Cholesterin is found particularly in wool fat in the form of cholesteryl stearate. Hence a hair wash is obtained from wool fat which contain cholesterin. Such a hair wash must be designated as a "fatty" hair preparation. The following method may be used to prepare such a product. A soaproot preparation is first made from four parts by weight of soaproot and thirty six parts by weight of water. The soaproot concotion is filtered and twelve parts by weight of lanolin are incorporated with the filtrate. The lanolin is used in the anhydrous state. The mixture is then heated up to the point at which the anhydrous lanolin melts, this being accomplished on a water bath, and the molten mass is then triturated in a mortar with 250 parts by weight of alcohol (fifty per cent. concentration). The hair wash that is obtained in this manner can be rubbed into the hair by saturating a piece of cotton with the mixture and using that to rub into the hair. Apoth. Zeitung, through Der Parfeumeur, 1929, page 60.

Dr. L. F. Nickell, Assistant Vice President in charge of Monsanto Chemical Works, Monsanto, Ill., has been elected a director of the Union Trust Co. of East St. Louis, Ill.

The Significance of a Label

UNGERER LABELS carry as full and complete chemical and physical specifications of the products sold under them as is practical. The label is a guarantee that the product meets those specifications and further that it is pure and of the finest quality.

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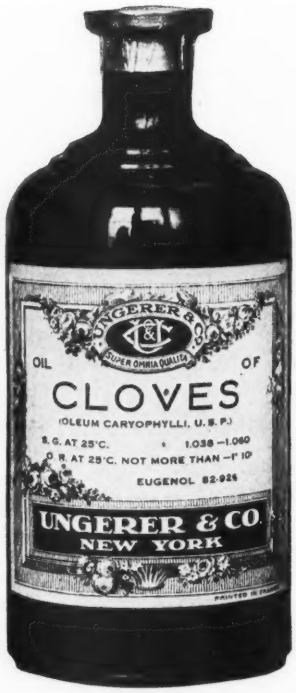

"Our Quality is Always Higher Than Our Price"

UNGERER & COMPANY
NEW YORK

{ *Chicago Happenings* }

The Annual Banquet of the Chicago Perfumery Soap & Extract Association was held on the evening of December 11th, in the Ballroom of the Edgewater Beach Hotel. An attendance of over three hundred was registered and the affair proved to be a glowing success. The Entertainment Committee, headed by Harold E. Lancaster, of Marshall Field & Co., who was assisted by A. J. Dedrick, of Edward T. Beiser Co.; Frank T. Robinson, of Monsanto Chemical Works; J. W. Bicks, of Carr Lowery Glass Co.; and George Woods, of Rossville Commercial Alcohol Corp., provided a highly effective seating arrangment and entertainment of a distinctive character. It was estimated that the banquet drew twice as many guests as the one held in December, 1928.

At the Annual Business Meeting of the Chicago Perfumery, Soap & Extract Association, held at the Midland Club on Wednesday, December 4th, the following new officers were elected: President, Clarence A. Seguin, of C. A. Seguin Co.; Vice-President, Chris Christensen, of Chas. Pfizer & Co., Inc.; Secretary-Treasurer. William H. Schutte, of P. H. Dreyer, Inc. These men succeeded, respectively, Arnold G. Schneider, of Victor Chemical Works; Frank S. Dedrick, of James S. Kirk & Co., and Frank H. Pettee.

Midway Chemical Co., 1444 West 37th st., recently placed on the market a new item in a highly attractive decorated tin package to be known as Swish. It is a cattle spray, exceedingly effective in destroying flies, mosquitoes, fleas, gnats and lice.

Spencer U. Boehmer, head of the recently established firm of S. U. Boehmer Co., is now about to begin distribution of his new lemon lotion. It is put out in a very attractive package moulded in the shape of a lemon, and will be known as Bimay Balm. The new shaving cream will be ready for the market in the near future.

Walter H. Jelly & Co., representatives of A. Maschmeijer, Inc., reports an addition to the force in W. H. Stewart, formerly of Harshaw Chemical Co.

Merrell-Hellman, Inc., of St. Louis, lately established, has been highly successful in merchandising the line of nail polishes, cuticle remover, etc., formerly handled by the Rose Dust Co. H. S. Merrell, Jr., who leads the new concern, was formerly associated with the J. S. Merrell Drug Co., which six months ago became one of the McKesson & Robbins drug houses.

Salesmen's Christmas Party

The Salesmen's Association of the American Chemical Industry will give their annual Christmas party on Friday evening, Dec. 27, at the McAlpin Hotel, New York. This party has been a yearly feature of the association's activities and promises this year, to equal, if not exceed, previous Christmas week celebrations.

The dinner will start about seven thirty with the distribution of the "Chemical Peddler," the organization's official publication, issued once a year. Numerous well known vaudeville and night club acts will be on the program between eight thirty until after eleven. There will be no speeches.

Additional details will be announced later by the committee, which consists of Grant A. Dorland, MacNair-Dorland Co., Chairman, and Robert Wilson, Dow Chemical Co., R. T. Grant, Noil Chemical & Color Co., William H. Adkins, Givauda-Delawanna, Inc., Robert Quinn, Mathieson Alkali Works, and H. B. Prior, H. B. Prior & Co.

Germans Demand American Advertising

Many German firms will not interest themselves in selling foreign products in the toilet preparations and cosmetic line unless the manufacturer undertakes to assist in the sale by carrying on a fairly extensive advertising campaign. It is observed that several German firms, quite a number of French and American, and also some British firms carry on fairly extensive propaganda in the interest of the sale of their toilet preparations in Germany.

The value of exports of toilet preparations from the United States to Germany during the past seven years are shown in the following table:

Year	*Toilet or fancy soaps*	*Perfumery and toilet waters*	*Talcum and other toilet powders*	*Creams rouges and other cosmetics*	*Dental creams*	*Other denti-frices*	*Other toilet prepara-tions*	*Total*
1922	$4,644	.....	.....	.....	.....	$22	$84	$4,750
1923	3,341	$497	$62	$313	.....	499	38	4,750
1924	2,101	640	.....	374	.....	515	.....	3,630
1925	13,730	1,278	1,324	10,371	.....	2,058	675	27,436
1926	29,735	1,836	27,673	39,673	$3,720	525	4,932	107,956
1927	24,253	2,449	39,331	22,978	1,873	176	25,824	116,884
1928	20,391	3,583	49,977	68,023	15,723	154	44,584	202,435

Water Content of Essential Oils

The absorption of radiant heat by the vapors of essential oils, observed by Tyndall, is believed to be due chiefly to the water which they contain. Attention is called the to fact that these oils are distilled in the presence of water. A simple method has been devised for measuring the relative water content of the oils, depending on the electrical conductivity of the oils. Results obtained with this method agree with those obtained by a qualitative electrostatic method and by the turbidity which is produced when the oils are mixed with turpentine. Oils extracted from xerophilous plants and from peels of citrus fruits are found not to contain water at all and are even hydrofuge. On the other hand, those oils which are obtained from the Cymbopogon may contain a relatively high percentage of water. These facts have been used to base conclusions relating to the botanical history of the oils. Only turpentine of all the products of plant physiology gave a turbidity with every oil which contains water. H. Nicol, Comptes rendues, 1929, volume 189, pages 289-292.

Hair Tonic Ingredient

Ketone which contain at least one aliphatic-aromatic group have the effect of promoting the growth of the hair. Such ketones are for example benyl-ethyl-methyl ketone, phenyl-ethyl-methyl ketone, phenyl-ethyl-phenyl ketone, phenyl-ethyl-ethyl ketone, methoxyphenylethyl-methyl ketone and also methoxybenzal-ethyl-methyl ketone and vanillal ketone. These ketones are used with or without a solvent and also in the form of salves. Thus the ketone may be dissolved in dilute alcohol and other solvents may be added to this solution, such as ethyl acetate. Odoriferous substances, essential oils, and other materials commonly used in cosmetics may also be added. Known hair tonics, such as pilcarpine, nettle extract and the like may also be added. A. Christen, Basel, Switzerland. U. S. Patent No. 1,732,120, filed Jan. 14, 1927.

Oil of Asarum Europeum

The composition of the essential oil of the root of Asarum Europeum depends on the soil and the climatic conditions. The oil contains asaraldehyde, $C_{10}H_{12}O_4$, melting point 114° C. (oxime melts at 138° C., asarone (dibromide melts at 86° C.), diasarone $(C_{12}H_{16}O_3)_2$ (oxidized to asaronic acid melting at 144° C)., an ethereal substance, $C_{11}H_{18}O$, a sesquiterpene and a sesquiterpene alcohol. S. Gerö, Riechstoffindustrie, volume 3, pages 176-7; 195-6; 214-6 and 232.

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EVERY manufacturer should be alert to the sales value and appeal of odor in his products—objectionable odors limit sales and should be reduced as far as possible and then neutralized by a pleasant perfume.

In general, raw materials should be purchased with respect to odor as well as other properties. When this is done many products are improved at once—then as a finishing touch cautious additions of a pleasant scent should be made.

The kind of odor to use will depend entirely on the article and no little skill is required to choose the right type, amount and lasting quality. For most purposes the cost of overcoming an objectionable odor or adding a pleasant one is very trifling.

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Market FACTS *From* GRASSE

- ¶ Clary Sage Takes on New Significance.
- ¶ Cassia Values Advance on Poor Yield.
- ¶ Rose Tree Trimming Starts Early.
- ¶ Orange Trees Recovering.
- ¶ Tuberose Demand Declining Steadily.

By O. C. Zilisch
Our Grasse Correspondent

CLARY sage, due to insufficient rains, showed up rather poorly in the second cutting, as reported some time ago. This plant is attracting the attention of many growers in the Grasse district, because of the fact that a number of very profitable outlets for the resulting essential oil have been developed during the past few years. Comparatively extensive plantations of clary sage are being nurtured in the Var, the region of Calliau, Montauroux and Fayence, where ground is less expensive than in the Grasse section proper. Furthermore, in these districts cultivation can be carried on with the aid of a plow, an important consideration in the successful and profitable operation of plantations of this character. Market prices on oil of clary sage have been firm, and point to remaining firm, for some time. In other words, every encouragement is offered to the grower to pay some attention to this culture. As pointed out by Rolet, clary sage, *salvia sclarea*, is utilized in the perfumery trade not only for the essential oil taken from the flowers, but because this oil contains resinous products which makes it a valuable fixative for other perfumes. In other words, it may be used in place of amber, which is sometimes difficult to obtain in the quantities desired. Well-known authorities like Gattefosse have, from time to time, done everything within their power to encourage the cultivation of clary sage. Apparently, the time has arrived when this plant is really coming into its own, and the growers would all appear to regard it very favorably. In the calcareous hills of Provence, Languedoc and the Dauphine clary sage grows wild, attaining a height in this native state of about 70 centimeters. Under cultivation, however, it readily attains double this height. Back in 1918 the catalog price for a kilogram of oil was 750 francs, which was considered very high at that time. To-day, according to local price quotations oil of clary sage is at 3,000 francs.

Cassia Advances

As reported in the October issue, the cold of the past Winter did a great deal of damage to the cassia trees, resulting in no more than several hundred kilograms of flowers. Last year the so-called Roman cassia flowers brought 15 francs, and the Ancienne, or Ancient, 35 francs. For the crop of 1929 the price for Roman cassia has been placed at 20 francs (about 80 cents, instead of 60 cents last year). The Ancient cassia has, up to the present time, not been priced officially, for this crop has been very deficient, resulting in individual dickerings between the growers and the distilling perfumers. However, if one takes into consideration the price of 20 francs for the Roman, then it is very possible to envisage a price for the Ancient somewhere between 45 and 50 francs (about $1.80 and $2.00, instead of $1.44 last year). The gathering of the cassia falls in the months of November and December, and even if the Winter is mild, the crop, as already pointed out in our October report, will be practically non-existent. Hope is, however, held out for a more successful yield during the Spring. Prices for the Roman oil is now approximately 4,500 francs per kilogram (about $180), and for the Ancient about 6,000 francs (approximately $240). There is no doubt in the minds of those in touch with the situation that prices on this oil will see a distinct reaction upward, due to the absolute shortage in this year's yield.

Jasmine Appears Strong

With the exception of the cassia, practically all of the perfume-flower plants in the Grasse district are in a state of rest, there being very little, if any, activity among the distilling perfumers at the present time. The jasmine plantations have been carefully prepared to meet the rigors of the coming Winter months. Even though the weather now is mild, and promises to remain so for some little time, it has been deemed prudent to take no chances on a possible cold spell that may make its appearance from one day to another. Some of the growers with plantations subject to a kind of rot are carrying out the necessary dunging process and disinfecting of the soil. This is also the time for placing new plantations, although this is not being carried on very extensively for the reason that the price paid this year (15 francs, or 60 cents, per kilogram) is considered way below that required for a successful growing of the jasmine. In fact, some of the growers are simply resting back on their oars, awaiting better times. Unless a readjustment can be reached in some manner, it is feared that the jasmine plantations will suffer a severe setback, simply due to the lack of interest on the part of grower. Such a setback would, of course, serve to raise the price of jasmine oil above what it is at the present time. This is considered to be particularly true due to the fact that this year's crop was below normal, as already pointed out in our previous reports. In fact, the yield of 1929 has been very easily absorbed by the trade, according to some of the distilling perfumers of Grasse. Hold-over stocks have been considerably reduced, leading to the conclusion that the growers will, very probably, receive a higher price next year for their crops of jasmine. At the present time the jasmine concretes are said to vary between 6,500 and 7,000 francs over here.

Rose Trimming Early

Trimming of the rose trees is advancing a pace, as well as the twisting and twining of the branches themselves. Due to an unusually bad crisis of shortage in labor, this work has been started way ahead of the usual time, February-March. The twining and twisting process is a hard piece of work, and if the workers are not available it develops into a formidable task. Furthermore, this cannot be done too late, for when the rose

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trees are already in sap the branches break and bruise very easily, to the ultimate harm of the yield itself. In order to best carry out this work, the laborers follow the trimmers and are supplied with heavy leather gloves that leave the thumb free. This work calls for forty to fifty days per worker per hectare. It can be readily seen, therefore, how the shortage of labor in the Grasse district is affecting the entire situation there, bringing about a grim dissatisfaction among some of the growers that reacts unfavorably upon the annual yields.

Despite the long dry spells of this summer, the rose trees, generally, promise a satisfactory yield next season. They have, however, lost the important place they held before the war, and some of the growers are simply maintaining their rose plantations by renewing from time to time the old trees, and letting it go at that.

Orange Trees Recovering

Apparently the orange trees, which suffered so severely during the cold of last Winter, are staging a very satisfactory come-back, with the exception, of course, of those trees which were critically damaged or entirely destroyed. Unless an unusually bad spell of cold weather is encountered, the orange trees should produce a satisfactory number of flowers in 1930. The growers, very much disturbed by the last winter, are taking every precaution to prevent any recurrence of the wide-spread damage done by the cold and snow during that extremely difficult period. At the present time the market conditions are, of course, anything but normal, with nerilo, for example, at 20,000 to 22,000 francs per kilogram (or about $800 to $880). Last year, during the month of September, neroli was quoted at 10,000 francs per kilogram (about $400), just about half of this year's quotation. With a good crop of orange blossoms in sight, therefore, this situation can be expected to see a decided change, with lower prices for the trade. Furthermore, it is hoped that next season's crop will produce a neroli of really good quality, as all of the better grades of neroli are reported already off the market or in the process of being absorbed.

Tuberose bulbs have been duly taken care of, the crop from this culture for this season having descended still farther below what used to be considered as normal for this flower. Unless a definite effort is made by the perfumery trade as a whole to conserve the tuberose, it would seem that it is destined to gradually disappear from the market. The growers cannot be expected to show an interest in a flower that is hard to grow and unprofitable as to price received for yield. In fact, the crop for this year is reported to be less than 25 per cent of that of 1928.

Parma Violet Outlook Poor

Parma violet plantations, which in years past were of great importance, are, apparently, not receiving the attention they used to. Crypogams are said to be at the root of the trouble. Some of the growers are doing their very best to overcome this condition, and wherever care has been exercised the situation has been successfully met. As the trade will remember, the Parma violets suffered severely from the cold and snow of last winter, with the result that the yield was negligible.

Lavender plantations in the Grasse and mountain districts have been accorded the usual care given them at this time of the season, and at the present writing everything in connection with this culture appears to be developing along normal lines.

Two executives of a cut-rate perfume chain in New York City were sentenced by the Court of Special Sessions to serve three months in the workhouse for selling counterfeit "Helena Rubenstein" rouge. The makers of the counterfeit have not as yet been found.

The imitation was discovered by the law firm of Mock & Blum, counsel for Helena Rubenstein, Inc. The cut-rate house was notified of the imitation but continued to sell the counterfeit merchandise. The case was then brought into court where no difficulty was experienced in proving the article to be counterfeit.

Controversial Vanilla

(*Continued from page 546*)

other nine years of 1,122,117 pounds of vanilla imported. We then find that 1924, the year of high prices, was deficient by 312,982 pounds. But we also find that 1928 imports were greater than the average amount by 326,403 pounds. And it appears absolutely certain that 1929 imports will exceed the average by a still greater amount.

It can, therefore, be seen that there is no reason to worry about supplies of Bourbon vanilla beans at least. The Mexican beans are always small in amount, and due to the fact that they are of a higher quality they carry a premium in price. If the users of Mexicans refuse to switch to Bourbon beans no matter how great the price differential becomes, the Mexican prices might be maintained. At any rate there is rarely a very great over-supply of Mexican beans and importers of this variety are generally able to control the situation to a great extent.

It is barely possible, however, that the Food, Drug & Insecticide Administration might decide to go more thoroughly into the subject of vanilla beans than it has in the recent past in an attempt to disaprove the attacks which have been made against it. If it is true that large lots of beans are in the condition that will not pass inspection, then we might see a lessened amount available for consumption and this might lend some strength to the present very weak situation.

Germicidal Soap

By using a mercuric salt in conjunction with cresol in soap, a preparation is obtained with a high degree of germicidal efficiency. On the other hand the action of the soap on the skin is mild. Thus a good ordinary soap made from coconut oil and olive oil in the proportion of two parts by weight of the olive oil to four parts by weight of the coconut oil properly saponified with caustic soda is mixed with one per cent. of mercuric chloride and ten per cent. of cresol. This soap will kill bacteria within five minutes at 20 degrees C in an eight per cent. solution. The soap is made as follows: 400 parts by weight of coconut oil and 200 parts by weight of olive oil are saponified with 106 parts by weight of caustic soda dissolved in 214 parts by weight of water. After saponification 10.3 parts of mercuric iodide in a solution prepared by dissolving eight parts of potassium iodide in fifteen parts of water are added. Then 103 parts by weight of cresol are added. P. H. Todd, Kalamazoo, Mich. U. S. Patent No. 1,731,551, filed May 25, 1927.

Oxidation of Ether

The oxidation of ether under ordinary circumstances met with in its use or storage is an important matter. A study has accordingly been made of the action of air, oxygen, carbon dioxide, nitrous oxide, or mixtures of these gases when they are passed through it. It was generally found that the amount of peroxide in the ether increased, while the amount of aldehyde decreased. Oxidation of ether is reduced by avoiding exposure to light, the accumulation of ether in the various apparatus in which it is used and by the use of a strip of copper in the bubbler. F. C. Hymas and G. Middleton, "Quarterly Journal of Pharmacy," 1929, volume 2, pages 278-280.

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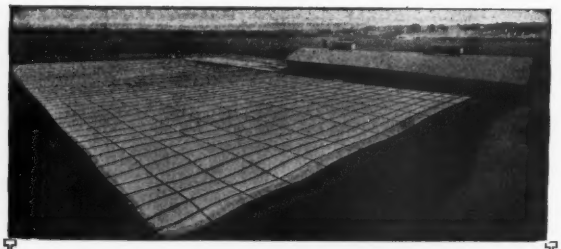

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White Depilatory Salves

These depilatory preparations consist for the most part of barium or strontium sulphide in combination with glycerin, zinc oxide and starch flour or talc. The composition of these preparations varies very widely. Thus a salve which contains twenty parts by weight of vaseilin, five parts by weight of lanolin, two and one half parts by weight of zinc oxide and 0.3 part by weight of thallium acetate as well as five parts by weight of rose water is used for this purpose. In using thallium acetate or other salts of thallium for this purpose, attention must be called to the danger due arising to the poisonous character of these substances.

A portion of the salve about the size of a pea is rubbed into the part of the body from which the hair is to be removed. This is done every night. The results are very slow in accomplishment and it is only after one and one half years application that there is any visible sign of hair removal.

Strontium sulphide has been used within recent times as the active principle of these preparations, for it has an outstanding advantage over barium sulphide in that it is less poisonous than this salt and does not evolve sulphuretted hydrogen when it is mixed with water. The following is a formula for making a depilatory preparation along these lines:—sixty parts by weight of strontium sulphide, twenty parts by weight of zinc oxide, nineteen parts by weight of starch, one part by weight of menthol, one hundred parts by weight of glycerin and enough of an essential oil to produce the proper odor.

Another preparation can be made in the following manner. Twenty parts by weight of starch are mixed with 120 parts by weight of water, 34 parts by weight of sodium sulphide, thirty parts by weight of calcium sulphide, 180 parts by weight of water, 36 parts by weight of palm oil and 21 parts by weight of glycerin. The solution of the sulphides is prepared so that it is boiling hot and then the starch, which has been made into a paste with water in a preliminary operation, is stirred into this boiling hot solution until a thick paste is formed. Then the palm oil, which is melted into liquid form, is mixed with the aforementioned preparation; the palm oil contains the glycerin as well as a few dops of oil of bergamot, which is added to perfume the product. The salve is used by merely being spread over the surface of the body from which the hair is to be removed. It is allowed to remain for ten to fifteen minutes and it is then washed off. The skin is thereafter rubbed with oil. Apotheker Zeitung, through Der. Parfuemer, 1929, page 48.

Orange Leaf Oil and its Composition

This oil is obtained by the distillation of the leaves and branches of the orange tree. The soil has not been a common one in the essential oil market up to recent times due to stringent curtailment of production. The oil possesses a very fine and strong odor which is much different from that of other oils obtained from the immature orange. One particularly important advantage of the oil is that it can be used alone as a perfume in the manufacture of eau de cologne.

This oil has not been studied thoroughly as far as its chemical composition and properties are concerned. A chemical examination of the oil revealed the fact that its aromatic qualtities are due principally to the relatively high amount of free and esterified nerol present in it. It is known now that nerol possesses the property of giving a very lasting odor to preparations in which it is contained and that this characteristic is much greater in nerol than in geraniol. The orange leaf oil contains from seven, to eight per cent. of nerol. Glichicht and Naves, "Les Parfums de France," 1929.

Adson Chemical Co., Inc., New York, has appointed the Arthur Hirshon Co., Inc., New York advertising agency, to direct the advertising of its product, Ozo Mist. Newspapers are being used.

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Patents Issued

(*Continued from page 566*)

after which the solvent is evaporated. If the translucent matter is colored while dissolved in the solvent, a colored face powder is obtained. The face powder is insoluble in water but may be moistened with it. The following two examples are of face powders:—(1) one thousand parts by weight of acetone, two parts by weight of nitrocellulose and one thousand parts by weight of zinc oxide; (2) one thousand parts by weight of benzene, two parts by weight of caoutchouc and one thousand parts by weight of zinc oxide. M. Fukui and T. Miyaguchi, Tokio, Japan. B. P. No. 312,562, filed Oct. 3, 1928.

Hair Oil

In producing a hair oil, a non-drying vegetable oil such as castor oil, camellia oil, peanut oil, coconut oil, soya bean oil, rapeseed oil, cottonseed oil, or thea-sasanqua oil, is agitated and heated with ethyl alcohol or methanol and a little ether. After standing seven days the mixture is washed with water and distilled under reduced pressure to yield, as distillate, an oil of less viscosity than the original oil. Y. Shimura and K. Takagi, Tokio, Japan. B. P. No. 312,568, filed Oct. 23, 1928.

Thymol

Thymol is prepared by heating meta-cresol under pressure with propylene-yielding materials, such as propyl alcohol, dipropyl ether, propyl halides or the corresponding isopropyl compounds. The propylene-yielding material may be added in portions, the water or hydrogen halide liberated being removed by distillation after each addition. When using propyl or isopropyl halides, the hydrogen halide formed may be fixed by means of added metallic oxides, such as zinc oxide or magnesium oxide. The thymol is separated by fractional distillation from the isomers which may also be formed. Rheinische Kampfer Fabrik Gesellschaft, Oberkassel, Duesseldorf, Germany. B. P. No. 312,907, filed April 29, 1928.

Pyridine Compounds

Pyridine compounds containing a $CH_2CO.R$ group in the 2-position or in both the 2- and the 5- positions are treated with hydrogen in the presence of a hydrogenating catalyst, such as nickel or metals of the platinum group, whereby one or both of the carbonyl groups is reduced to the carbinol and then the pyridine nucleus becomes hydrogenated. By choosing the working conditions, the hydrogenation may be stopped at the carbinol stage. According to example, 2-phenylacetyl-pyridine is hydrogenated using a nickel catalyst to give 2-phenyl-hydroxyethyl-pyridine. On further hydrogenation with platinum as a catalyst, or by using increased pressure with a nickel catalyst, 2-phenyl-hydroxyethyl-piperdine is obtained. A. Boehringer, Nieder-Ingelheim-On-Rhine, Germany. B. P. No. 312,919, filed May 29, 1929.

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Aromatic Pentavalent Antomony Compounds

These are prepared in solution by treating a mixture of an aromatic diazonium salt and an antimony halide, or a double compound of a diazonium halide with an antimony halide, with a tertiary base such as pyridine or quinoline. The products may be decomposed with water to form the corresponding stibinic acid. According to the examples the double compound of benzene diazonium chloride and antimony trichloride is heated in pyridine until the evolution of nitrogen ceases. If the solution of the resulting phenyl antimonic chloride poured into water, phenylstibinic acid separates out. Par a-diazonium acetanilide may replace the benzene diazonium chloride. Or tho-chloro-para-aminoacetanlide is diazotized and treated with antimony oxide dissolved in hydrochloric acid. The resulting double compound is introduced into pyridine, when the spontaneous rise in temperatures causes the evolution of nitrogen. On pouring the product into water, meta-chloro-para-ace-tylamion-phenylstibinic acid is formed. Instead of starting with the double compound, the components may be individually introduced into the tertiary base, in which case the diazonium halide may be replaced by any diazonium salt. I. G. Farbenindustrie A. G., Frankfort-on-Main, Germany. B. P. No. 313,058, filed Feb. 1, 1928.

Synthetic Drugs

2-Phenylacetyl derivatives of the pyridine and quinoline series are prepared by converting 2-methyl derivatives of pyridine, quinoline or their substitution products into the corresponding 2-styryl compounds by interaction with benzaldehyde, treating with halogen to form the saturated addition products, eliminating hydrohalide, and finally adding on the element sof water to the acetylenic product by treatment with aqueous sulphuric acid. Various examples are given, such as 2-phenylacetylpyridine from 2-methylpyridine, 2:6-diphenylacetylpyridine from 2:6-distyrylpyridine, 2-phenylacetylquinoline from benzylidine-quinaldine-dibromide, 2-phenylacetylquinoline-4-carboxylic acid from 2-methylquinoline-4-carboxylic acid, etc. C. H. Boehringer Sohn, Ingelheim-on-Rhine, Germany. B. P. No. 311,387, filed May 10, 1929.

Phosphatides and Vitamins

Liquid substances such as phosphatides which are obtained according to the process patented in British Patent No. 285,417 in a water soluble form are brought into the state of a concentrated solution by the use of compression evaporators, the temperatures being kept low and the process carried out rapidly. By further rapid drying, at temperatures preferrably below body temperature, by processes such as are used for the production of milk powder, phosphatides in the condition of dry products are produced. The material may be subjected to the action of ultra-violet rays. Examples describe the production of products from garlic and peas. The products are stated to possess vitamin-like properties and to have the effect of lowering the blood pressure. Pharma-Gans Pharmaceutisches Institut L. W. Gans A. G., Oberursel, Taunus and W. Kollath, Breslau, Germany, and H. Magistris Vienna, Austria. B. P. No. 311,436, filed Jan. 10, 1928

Spinal Anaesthetics

Spinal anaesthetic solutions which will not mix with the spinal fluid until the anaesthetic has been absorbed are obtained by the incorporation therein of a glue-like adhesive such as gliadin or like alcohol soluble cereal protein. Anaesthetics specified are para-amino-benzoyl-diethyl-amino-ethanol and its hydrochloride, rhe hydrochloride of diethyl-aminopropyl-cinnamate, and the hydrochloride of para-aminobenzoyl-dimethylamino-me-thyl isobutanol. Suitable solutions in distilled water contain five to ten per cent. of the anaesthtic, 0.03 to 0.06 per cent. of gliadin, ten to sixteen per cent. of ethyl alcohol. The gliadin may be replaced, either wholly or in part, by a mucilage pre-

(*Continued on page 588*)

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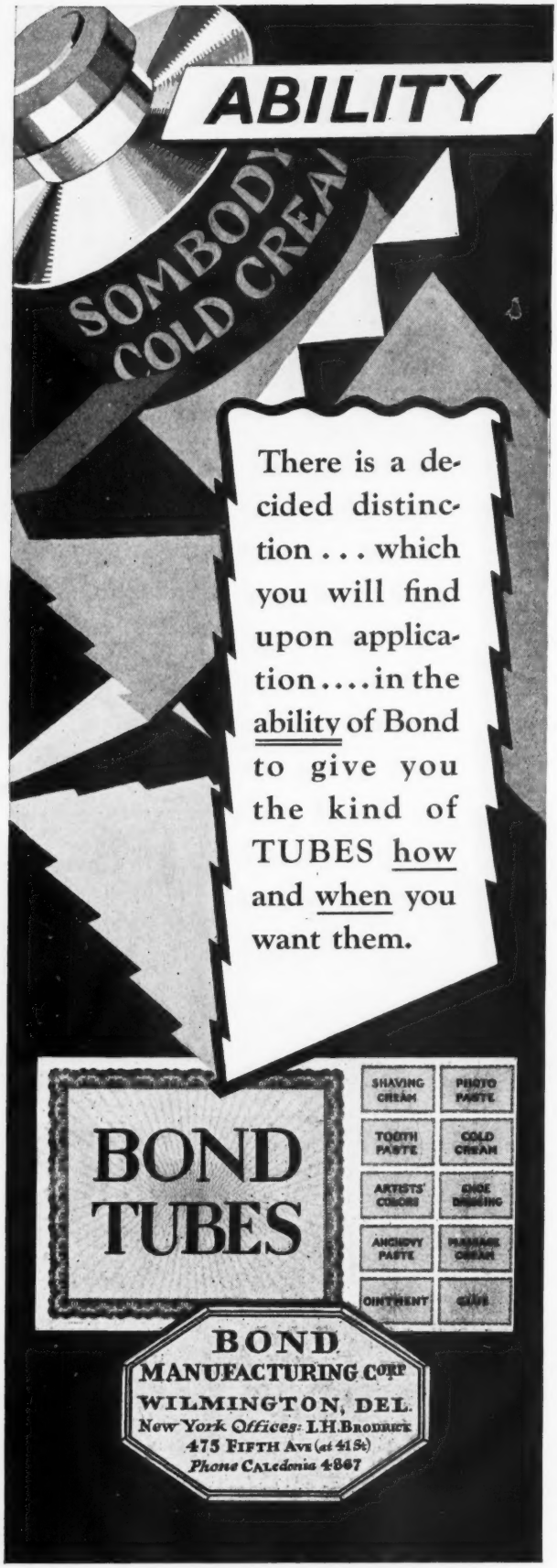
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pared by prolonged boiling of wheat flour suspended in a gauze bag in water and taking the clear supernatant mucilaginous liquid. When such mucilage wholly replaces the gliadin, alcohol may be omitted from the anaesthetic solution. The solutions are sealed in ampoules and sterlized by repeated immersion in boiling water or by a single treatment in an autoclave. G. P. Pitkin, Bergen, N. J. and C. W. Hopper, Jamaica, N. Y., assignors, H. A. Metz Laboratories Inc., New York. B. P. No. 311,382, filed May 9, 1929.

Iodo-phenolphthalein Compounds for X-Ray Examination

Monoalkali metal salts of tetraiodophenolphthalein are prepared in colloidal form for administration to a patient prior to gall bladder examination by X-rays. The monosodium salt may be administered by the mouth, preferably in admixture with fruit juice. The colloidal mono-salt is prepared by treating a solution of the dialkali metal salt with an acid or acid salt, in the presence of a protective colloid. According to an example an emulsion of the monosodium salt in the colloidal state is produced by dissolving the disodium salt in a hot aqueous gelatine solution, cooling the solution, and adding with vigorous stirring an aqueous solution of citric acid. Other acids such as hydrochloric, sulphuric, malic or tartaric, or acid salts, preferably buffer salts, such as disodium phosphate or sodium tetraborate may be used, and the gelatine may be replaced by gum arabic, gum tragacanth, glue, starch, dextrose, glucose, or other carbohydrates. E. F. Ellzey, Buffalo, N. Y., assignor, National Aniline & Chemical Co., New York, N. Y. British Patent No. 304,589, filed Dec. 31, 1928.

GERMAN PATENTS

Di and Polyiodo Substitution Products of Quinolin Carboxylic Acids

The products, which have therapeutic value, are made by allowing iodine to act on quinolincarboxylic acids in the presence of sulphuric acid which contains sulphuric acid anhydride. Schering-Kahlbaum A. G., Berlin. G. P. No. 472,821, filed May 23, 1926.

Pulverulent Formaldehyde-Albumen Product

This product is made in the following manner. Animal blood or certain of its constituents are carefully mixed with formaldehyde. This substance is advisedly added in such proportions that sufficient is present for saturation of the amino-acid groups of the blood albumen. The amount of formaldehyde is such that a state of incipient precipitation is attained. The resulting product is allowed to stand for several days at a temperature which does not rise above 42° C. The product dries out during that time. It is finally ground into the form of a fine powder. Dr. H. Reil, Oberursel, Germany. G. P. No. 472,820, filed Feb. 7, 1926

Completely Metal-free Cystein Hydrochloride

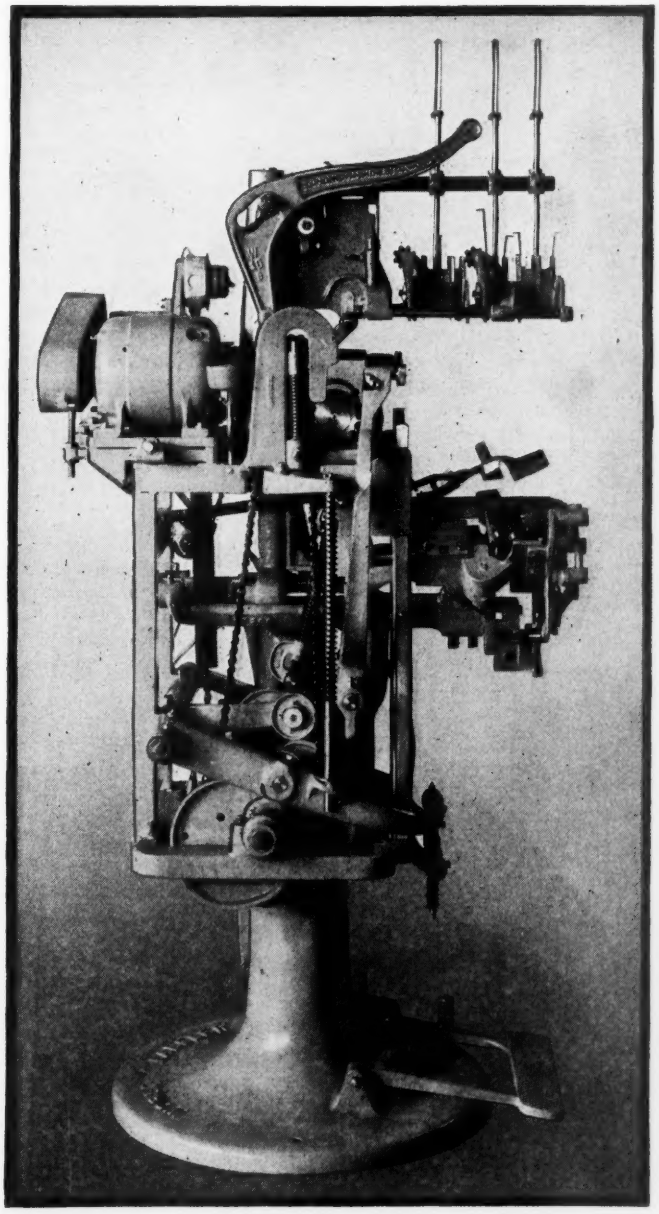
This substance, which possesses therapeutic properties, is prepared in such a condition that it is completely free from metal. The crystals of cystein hydrochloride which are obtained by reduction from syctin are triturated with pure acetone a sufficient number of times until the cystein hydrochloride is completely free from metals. Schering-Kahlbaum A. G., Berlin. G. P. No. 472,822, filed June 9, 1927.

Round Box for Biochemical Tablets

A round box for containing biochemical tablets is provided with a number of radial section walls which divided it into a number of sections. The openings of these sections through which the tablets are removed, open and shut in series. Each compartment has an opening in the annular wall of the box. The cover of the box is rotated and contains a slot which can be made to

(*Continued on page 590*)

Improved World Labeler, Model S



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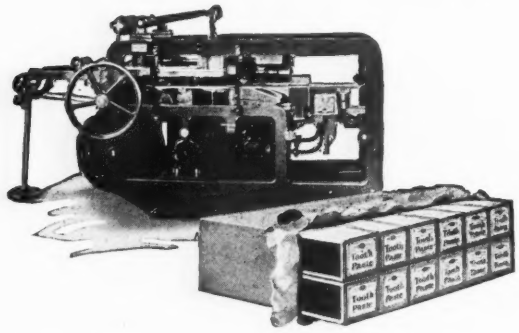

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cover the opening in the compartment by suitably rotating the cover. Then the tablet can be removed from the box. E. Vollmann, Barmen, Germany. G. P. No. 472,832, filed April 23, 1926.

Radium Preparations

Highly active radium preparations are made from solutions of radium salts by the following method. The solutions of radium salts are mixed with solutions of such substances, that yield precipitates, possessing larger internal surface area, with a common precipitating agent. These substances must also be such that the externally visible surface structure is maintained constant and also the internally invisible surface structure. Dr. O. Hahn, Berlin-Dahlem, Germany. G. P. No. 472,857, filed Aug. 16, 1924.

Bismuth-Alkali Tartrate

Two molecules of freshly precipitated bismuth hydroxide are dissolved in concentrated solutions of molecular quantities of sodium bitartrate, potassium bitartrate and potassium-sodium tartrate. The new compound is obtained from this solution in the solid state in the usual manner by evaporation, crystallization or precipitation by means of organic solvents. Chemische-pharmazeutische A. G., Bad Homburg, Germany. G. P. No. 469,554, filed July 26, 1923.

Farnseol

Nerolidol is treated with reagents such as acetic anhydride or glacial acetic acid and heated, the product being saponified. The saponification product which is isolated in the usual manner and then dried is treated with phthalic anhydride and the phthalic acid ester of farnesol obtained is saponified with alcoholic alkali solution. M. Raef & Co., Genf., Switzerland. G. P. No. 469,555, filed March 14,1924.

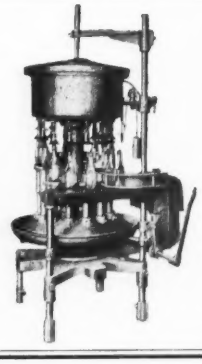
Liquefying Tribromo-Ethyl Alcohol

This product is obtained by treating the tribomo-ethyl alcohol with small amounts of formamide. I. G. Farbenindustrie A. G., Frankfurt-on-Main, Germany. G. P. No. 469,625, filed May 10, 1927.

Testing Purity of Castor Oil

An interesting observation is made on the testing of castor oil to determine its purity by means of the petroleum spirit test. It was found that contrary to the British Pharmacopoeia, the petroleum spirit which is used for testing the oil contains a little aromatic hydrocarbon. When pure hexane is used for testing genuine castor oils, the clearing points of several samples varied over so wide a range that consistent results could not be obtained and the value of the test is lost. T. T. Cocking and S. K. Crews, "Quart. Journal of Pharmacy," 1929, volume 2, pages 217-226.

(*Continued on page 592*)



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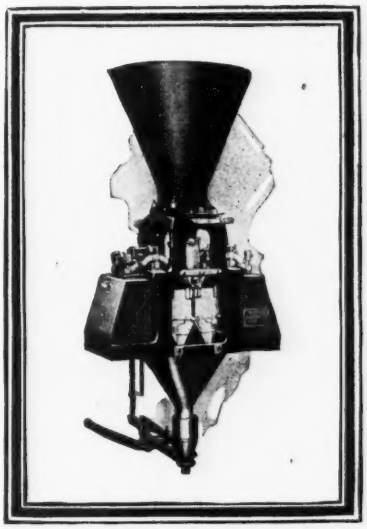

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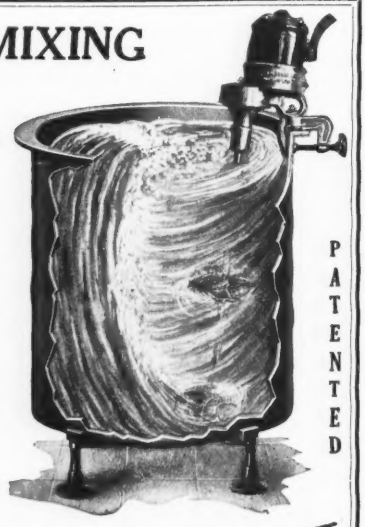

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GERMAN PATENTS

Adipinic Acid and Ethyl Substituted Products

These products are manufactured by treating hydrogenated phenols in the presence of oxygen carriers. The phenols are oxidized in this manner. Deutsche Hydrierwerke A. G., Rodleben near Rosslau, Germany. G. P. No. 473,960, filed Feb. 13, 1926.

Salts of Orthoaminophenylpropionic Acid

These salts, their substitution products, homologues and analogues are made by treating 2-keto-1:2:3:4-tetrahydroquinoline (hydrocarbostyril), substitution products, homologues and analogues with alkaline reagents at high temperature. I. G. Farbenindustrie A. G., Frankfort-on-Main, Germany. G. P. No. 474,221, filed April 7, 1925.

Water Insoluble Medicinals in Injectable Form

This process relates to the conversion of water insoluble or, difficultly soluble medicinals into such form that they can be administered drop by drop or injected. These medicinals are treated with a mixture of water soluble alkylurea or alkyleneureas with water soluble esters of carbaminic acid, and in certain cases in the presence of water. The medicinals are brought into solution in this manner. Gesellschaft fuer Chemische Industrie in Basle, Basel, Switzerland. G. P. No. 474,343, filed Sept. 16, 1923.

Liquefying Phosphatides

The phosphatides are treated with liquid fats, such as cocoanut oil or palm kernel oil so that the products obtained are homogeneous and liquid at moderate temperatures, maximum at 40 to 50 degrees C. J. D. Riedel-E. de Haen A. G., Berlin-Britz, Germany. G. P. No. 474,269, filed July 21, 1923.

Isopropylallyl-Barbituric Acid Derivative

Isopropyl-allylbarbituric acid and 1-phenyl-2:3-dimethyl-4-dimethylamino-5-pyrazolone are dissolved together in suitable solvents in molecular ratio or with an excess of the materials soluble in the solvent chosen. The salt is then allowed to crystallize from the solution. F. Hoffmann La Roche & Co., A. G., Basel, Switzerland. G. P. No. 474,664, filed, Dec. 7, 1924.

Physiologically Active Colloidal Gold

A solution of a gold salt, particularly gold chloride, is allowed to react with a dilute solution of an alkali hydroxide or alkali silicate. The solution is allowed to remain at rest for quite some time so that the colloidal status is attained. The solution must first be made neutral before this is done. The precipitate that is formed during this period is removed by centrifuging. F. Passek, Hamburg, Germany. G. P. No. 474,620, filed Feb. 4, 1927.

Water Soluble Preparations of Insoluble Medicinals

This process describes a process for the production of water soluble preparations and aqueous solutions of organic medicinals which are naturally insoluble in water or which are very slightly soluble in water. These medicinals are treated with aqueous solutions of salts of alkylated, arylated oxy-fatty acids. Chemische Fabrik von Heyden A. G., Radebeul-Dresden, Germany. G. P. No. 474,689, filed Nov. 1, 1925.

Body Powders

These powders are made by mixing solid organic superoxides with weakly alkaline substances, particularly calcium triphosphate. P. Goenee, Deventer, Holland. G. P. No. 474,690, filed Sept. 10, 1926.

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Acetanilid
Ammonium Valerate

Chemicals

Monthly Review

Cold Weather Firms Alcohol

Alcohol continues in a firm position in all centers of the country. The recent cold snap has consumed a good percentage of the alcohol in anti-freeze dealer's hands and orders are now coming into the distillers for replacement stocks. There is every likelihood that the production of alcohol for the current year will be well absorbed and prices will undoubtedly remain as at present levels until the Spring, when it is customary for the distillers to publish new price schedules.

Production of alcohol has been increasing steadily in conformity with increased consumption. In the fiscal year ended June 30, production totaled 106,237,395 wine gallons, representing an increase of 16,674,764 wine gallons over the previous twelve month period.

Phenol Remains Firm

Phenol remains unchanged in price with production and demand being fairly well equalized. This condition of balance has maintained the price at 17c to 18c per lb. for some months past. There does not appear a likelihood of a buyer's market developing anywhere in the near future as the consuming field has been greatly augmented by the increased production of condensite products. Prices will remain at these levels so long as this condition exists.

Bismuth Subnitrate Still Low

Bismuth subnitrate continues to sell below cost of manufacture which is evidenced by the fact that it is selling at the same cost as the metal from which it is manufactured. Competition among manufacturers being very severe, there are at present no indications as to when this condition will be changed. However, it would be wise on buyers' parts to keep a goodly stock of this material if they are using it steadily, for some day the battle among manufacturers will cease and the price will advance quite sharply.

Other bismuth salts, as well as the metal, remain firm and unchanged in price. Demand is of goodly proportions but continues strictly along routine channels.

Citric Acid Position Unchanged

Citric acid is very steady and firm in price with the situation still completely in control of American producers. Import material continues to be eliminated by the high prices abroad which were the result of the Italian determination to cease exports of citrate of lime and export only the manufactured acid. Consequently the market in Europe is higher than our market here despite the duty levied by this country.

	Current Market		1929 High	1929 Low	1928 High	1928 Low
Acetanilid, USP, 200 lb bbls..lb.	.36	.37	.37	.36	.37	.28
Acetone, pure 350 lb drs wks..	.14	.14½	.19	.14	.18	.14
Acetphenetidin, 225 lb bbls..lb.	1.25	1.3	1.35	1.25	1.40	1.25
ACID, Acetylsalicylic, 225 lb ....bbls.	.85	.90	.90	.85	.90	.85
Agaric, 1 oz vials.....oz.	.....	3.50	3.50	3.50	3.50	3.50
Arsenous, USP, 220 lb bbls lb.	.....	.18	.18	.18	.18	.18
Benzoic, USP, 100 lb bbls.lb.	.60	.61	.61	.60	.61	.60
Boric, 300 lb bbls.....lb.	.09½	.10	.10½	.07½	.12	.11
Cacodylic, 5 lb. bot.....lb.	.....	8.00	8.00	8.00	8.00	8.00
Camphoric, USP, VIII 1 lb bot.....lb.	4.82	4.82	4.82	4.82	4.82	4.82
Carbolic, USP, crys 112 lb tins.....lb.	.17	.18	.19	.14	.21	.14
Cinnamic, 5 lb cans.....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Citric, USP, crys 230 lb bbl .....lb.	.....	.46	.46	.46	.46	.44½
USP, crys imp. 112 lb keg .....lb.	.59	.61	.61	.59	.61	.55
USP, powd 200 lb bbl...lb.	.....	.47	.47	.47	.47	.45½
Diethylbarbituric, 1 lb bot lb.	.....	4.60	4.60	4.60	4.60	4.60
Gallic, USP, 150 lb bbls..lb.	.....	.74	.74	.74	.74	.74
Glycerophosphoric, 25% 1 lb bot.....lb.	1.40	1.75	1.75	1.40	1.45	1.40
Hydriodic, USP, 10% 5 lb bot.....lb.	.....	.80	.80	.80	.80	.80
Hydrobromic, USP, 40% 155 lb. cbys.....lb.	.....	.55	.55	.55	.55	.55
Hypophosphorous, USP, 30% .....lb.						
5 gal demis.....lb.	.....	.85	.85	.85	.85	.85
Lactic, USP, VIII 100 lb cbys lb.....	.56	.62	.62	.56	.62	.56
USP, X 100 lb cbys.....lb.	.62	.64	.64	.62	.64	.62
Phenylcinchonic.....lb.	.....	4.50	4.50	4.50	4.50	4.50
Phosphoric, USP, Syr 70 lb drs.....lb.	.14	.15	.15	.14	.16	.14
Pyrogallic, crys 5 lb cans..lb.	1.40	1.50	1.50	1.40	1.50	1.40
Resublimed, 5 lb cans...lb.	1.80	1.85	1.85	1.80	1.85	1.80
Salicylic, USP, 100 lb bbls.lb.	.39	.40	.40	.39	.41	.40
Succinic, 100 lb bbls.....lb.	.....	1.35	1.35	1.35	1.35	1.35
Sulfurous, USP, 6% 100 lb cbys.....lb.	.05	.06	.06	.05	.06	.05
Tannic, USP, fluffy 50 lb bbls. .....lb.	.85	.90	.93	.85	.93	.87
Powd 200 lb bbls.....lb.	.80	.85	.85	.80	.85	.80
Tartaric, USP, 300 lb bbls.lb	.37½	.38½	.38	.37½	.38	.35
Aconitine, Alk, crys 1 oz vials .....oz.	.....	30.00	30.00	30.00	30.00	30.00
Amorphous, 1 oz vials....oz.	.....	20.00	20.00	20.00	20.00	20.00
Adeps Lanae, hyd 350 lb bbls lb.	.15	.16	.16	.15	.16	.15
Anhydrous, 350 lb bbls....lb.	.16	.18	.18	.16	.19	.16
Agaricin, 1 oz vis incl.....oz.	.....	2.32	2.32	2.32	2.32	2.32
ALCOHOL, Benzyl, 5 lb bot lb.	1.25	1.35	1.35	1.25	1.55	1.25
Ethyl, USP, 190 pf 50 gal bbls.....gal.	2.69½	2.79½	2.79½	2.69½	2.79½	2.66½
Pure tax free.....gal.	.61	.69	.69	.61	.77	.54
Grain drums.....gal.	2.69	2.79	2.79	2.69	4.00	2.67
Denatured, drums add 7c for bbls.....						
No. 1 spec.....gal.	.52	.60	.60	.47	.55	.43
1 comp.....gal.	.53	.61	.61	.48	.56	.44
No. 5 comp.....gal.	.52	.60	.60	.47	.56	.44
23 a, spec.....gal.	.53½	.61½	.61½	.48½	.68	.43½
39 b, spec.....gal.	.56	.65	.71	.62	.71	.56
40 m, spec .....gal.	.51½	.59½	.66½	.56½	.66½	.51½
Isopropyl refd 98-99% drs .....gal.	1.25	1.50	1.50	1.25	1.50	1.25
Phenylethyl, 1 lb bot.....lb.	8.00	10.00	10.00	8.00	10.00	8.00
Aloin, USP, 100 lb cases....lb.	1.90	1.95	1.95	1.25	1.30	.90
Aluminum Acetotartrate kegs .....lb.	...	1.60	1.60	1.60	1.60	1.60
Amidipyrine, 10 lb boxes....lb.	4.25	4.45	4.45	4.25	4.75	4.25
AMMONIUM, Acetate 100 lb kegs.....lb.	.38	.40	.40	.30	.38	.34
Benzoate, USP, 1 lb bot...lb.	.....	1.27	1.27	1.27	1.27	1.27
Borate, 10 lb bot.....lb.	.....	.35	.35	.35	.35	.35
Bromide, USP, 450 lb bbls.lb.	.47	.49	.50	.47	.50	.48
Imported, 112 lb boxes..lb.	.48	.50	.50	.48	.50	.48
Carb, USP, lump 100 lb kegs .....lb.	.....	.13½	.13½	.13½	.13½	.13½
USP, powd 100 lb kegs..lb.	.....	.14½	.14½	.14½	.14½	.14½
Citrate, 100 lb kegs.....lb.	.85	.90	.90	.85	.90	.85
Ichthyolate, as to brand..lb.	4.00	4.50	4.50	4.00	4.50	4.00
Iodide, USP, 25 lb jars...lb.	.....	5.20	5.20	5.20	5.20	5.20
Phosphate, dibasic 250 lb bbls .....lb.	.48	.50	.50	.43	.48	.43
Salicylate, USP, 100 lb kegs .....lb.	1.15	1.20	1.20	1.15	1.20	1.15
Valerate, USP, 25 lb jars...lb.	2.75	2.90	2.90	2.75	2.90	2.75

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Glycerine Situation Soft

Glycerine, chemically pure, remains unchanged in price at 14c per lb. While this price has remained unchanged for several months in spite of a dull market, the underlying situation is not encouraging to the sellers. Stocks both here and abroad are large and demand has fallen off to a considerable extent.

Soap lye and saponification crude are also lifeless and although bids of 7c per lb., basis 80%, loose, delivered, were on the market, sellers have declined this figure. On the other hand, reports from Europe show a further decline over there and soap lye crude has been offered at an equivalent of 6¾c per lb., basis 80%, loose, delivered.

Stocks abroad are evidently very plentiful, this condition being reflected in a particularly weak market there. Prices are at such levels that they are of interest to buyers here. Imports have increased while exports have fallen off greatly, which will have the tendency to further undermine the local situation.

One of the larger refiners of glycerine stated that, "new consuming fields must be found as production is above demand at present, and the prospects for the future do not look reassuring." From conditions now existing in the trade the early new year should see a price below 14c per pound.

Menthol Stronger

Menthol, after having been weak in tone for some months past, is now showing a firmer position. Prices are now quoted at $4.50 and $4.65 per lb. which is an advance of about 10c per lb. during the past month. This is attributed principally to the fact that the primary market, which had been weak, is now showing a firmer tone. Prices for shipment are about 75c per lb. higher than the lowest price reached with no tendency on the part of the primary market to shade quotations. There is every likelihood that these quotations will be maintained in the immediate future as spot stocks are not particularly large although demand is but routine. It is becoming more and more customary for consumers of menthol to contract for their requirements, even though they are buyers in a small way. To this tendency is atrributed the routine demand at this period.

Batavia Cinchona Exports

Exports of cinchona bark from Batavia to all countries for the second quarter of 1929 amounted to 2,276 metric tons against 1,245 metric tons for the first quarter of 1929, or a total for the first six months of 3,521 metric tons. Only 1,366 metric tons were exported during the second quarter of 1928. (Vice Consul D. W. Maher, Batavia).

The production of cinchona bark for the entire Netherlands East Indies during 1929 is now estimated at 10,686 metric tons, divided, Java, 9,383,737 tons and Sumatra 1,302 tons. The estimates are based on returns from 97 cinchona estates. Total production during the first seven months of 1929 for Java amounted to 5,861 tons and for Sumatra 1,070 tons. (Office of the trade commissioner, Java).

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Amylene Hydrate, 1 lb bot..lb.	.....	7.10	7.10	7.10	7.10
Antipyrine, USP, 100 lb cans.lb.	2.65	3.00	3.00	1.53	1.75	1.53
Apomorphine Hydrochloride, ¼ oz. vials.....oz.	22.60	22.70	22.70	22.60	35.80	22.60
Arecoline Hydrobrom, 1 oz vials .....oz.	7.75	8.75	8.75	7.75	11.45	7.75
Aspidospermine Amorphous.oz.	.....	15.00	15.00	15.00	15.00	15.00
Atropine Alk, USP, 1 oz. vials .....oz.	7.00	9.10	9.10	7.00	9.10	9.10
Methyl bromide, 1 oz vials.oz.	.....	25.00	25.00	25.00	25.00	25.00
Sulfate, 5 oz cans.....oz.	.....	3.00	3.00	3.00	3.00	3.00
Single ounce.....oz.	.....	3.15	3.15	3.15	3.15	3.15
Barium Iodide, 5 lb box.....lb.	.....	5.15	5.15	5.15	5.15	5.15
Sulfate, X-ray diagn bbls..lb.	.09½	.10	.10	.09½	.10	.09½
BAY RUM Porto Rico, 45 gal. bbls.....gal.	.85	.90	.90	.85	.90	.80
Domestic syn. 50 gal bbl..gal.	.70	.75	.75	.70	.75	.65
St. Thomas, 50 gal bbls...gal.	.80	.90	.90	.80	.90	.80
Benzonaphthol, 5 lb boxes...lb.	2.50	2.60	2.60	2.50	2.60	2.50
Benzoyl Cholride, 500 lb dr..lb.	.....	1.00	1.00	1.00	1.00	1.00
Benzyl Benzoate, Medicinal FFC.....lb.	.....	1.40	1.40	1.40	1.40	1.40
Chloride Redis, 160 lb cby.lb.	.30	.35	.35	.30	.35	.30
Formate, 1 lb bot.....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Succinate, 160 lb cby.....lb.	.....	5.25	5.25	5.25	5.25	5.25
BISMUTH, metal 100 lb cases .....lb.	.....	1.70	1.70	1.70	2.25	1.70
Ammon. Citrate, USP, 5 lb cans.....lb.	.....	5.50	5.50	5.50	5.65	5.50
Betanaphtholate, 5 lb box.lb.	.....	3.10	3.10	3.10	3.35	3.10
Citrate, USP, 5 lb cans....lb.	.....	2.75	2.75	2.75	2.95	2.75
Chloride.....lb.	.....	3.15	3.15	3.15	3.40	3.15
Hydroxide.....lb.	.....	3.05	3.05	3.05	3.30	3.05
Nitrate, 25 lb jars.....lb.	.....	1.80	1.80	1.80	1.95	1.80
Oxide anhydrous.....lb.	.....	3.40	3.40	3.40	3.70	3.40
Oxychloride, 25 lb boxes...lb.	.....	3.10	3.10	3.10	3.35	3.10
Salicylate, 25 lb boxes.....lb.	.....	1.80	1.80	1.80	1.95	1.80
Subcarbonate, USP, 25 lb boxes.....lb.	.....	2.20	2.20	2.20	2.70	2.20
Subcarbonate, X-ray diag 1 lb. bot.....lb.	.....	3.45	3.45	3.45	3.65	3.40
Subgallate, USP, 25 lb boxes .....lb.	.....	2.50	2.50	2.50	2.70	2.50
Subiodide, 5 lb lots.....lb.	.....	4.25	4.25	4.25	4.40	4.20
Subnitrate, USP, 25 lb jar.lb.	1.58	1.60	1.65	1.58	2.30	1.60
Subsalicylate, USP, 25 lb boxes.....lb.	.....	2.90	2.90	2.90	3.15	2.90
Tannate.....lb.	.....	2.65	2.65	2.65	2.65	2.45
Borax, crys USP, 400 lb bbls.lb.	.....	.06	.06	.03½	.05	.03½
Bromoform, USP, 5 lb bot cases .....lb.	1.65	1.90	1.90	1.65	1.90	1.65
Butylchloral Hydrate bot....lb.	4.00	5.00	5.00	4.00	5.00	4.00
Cadmium iodide, 10 lb bot...lb.	.....	4.55	4.55	4.45	4.55	4.45
CAFFEINE Alk, USP, 1..... 100 lb kegs.....lb.	2.75	2.80	2.95	2.75	3.20	2.80
Citrated, 50 lb cans.....lb.	2.35	2.60	2.60	2.00	2.25	2.00
Hydrobromide, 1 lb bot...lb.	4.80	5.00	5.00	4.80	5.00	4.65
Hydrochloride, 1 lb bot...lb	6.05	6.55	6.55	6.05	6.55	6.05
Sulfate, 1 lb bot.....lb.	5.40	5.90	5.90	5.40	5.90	5.40
Sodium Benzoate, tins...lb.	.....	3.05	3.05	3.05	3.05	3.05
Salicylate, tins.....lb.	.....	2.95	2.95	2.95	2.95	2.95
Calcium Bromide, 100 lb cs..lb.	.....	.60	.60	.60	.60	.60
Carb, USP, 175 lb bbls....lb.	.04½	.06½	.06½	.04½	.06½	.04½
Glycerophos, 250 lb bbls...lb.	.....	1.40	1.40	1.40	1.40	1.40
Hypophos, USP, 25 lb cans lb.	.60	.65	.65	.60	.65	.60
Iodide, 5 lb bot.....lb.	.....	4.35	4.35	.35	4.35	4.35
Lactate, USP, 500 lb bbls lb.	.45	.50	.50	.45	.50	.45
Lactophosphate Soluble...lb.	.....	1.20	1.20	1.20	1.20	1.20
Powdered tins.....lb	.....	1.00	1.00	1.00	1.00	1.00
Insol, powd tins.....lb.	.....	.50	.50	.50	.50	50
Sulfide, USP, 100 lb drs...lb.	.21½	.24	.24	.21½	.25	20
CAMPHOR, Jap. ref. slabs 100 lb. cases.....lb.	.63	.63½	.63½	.59½	.66	.57
Refined powd.....lb.	.65	.66	.66	.63	.70	.62
½ oz tab, 100 lb cases....lb.	.76	.77	.77	.73	.75	.68
Liniment, bbls.....gal.	2.20	2.30	2.30	2.20	2.30	2.20
Monobrom, 100 lb cases...lb.	1.85	1.90	1.90	1.85	1.90	1.85
Casein edible, 100 lb kegs...lb.	.45	.55	.55	.45	.55	.45
Charcoal Animal medicinal jars incl.....lb.	.....	.50	.50	.50	.50	.50
Charcoal Wood, powd, 100 lb. bbls.....lb.	.05½	.06	.06	.05½	.06	.05½
Chloroform, USP, 50 lb drs...lb.	.25	.27	.30	.25	.30	.28
Chloral Hydrate, USP, 25 lb jars.....lb.	.75	.80	.80	.75	.80	.70
100 lb drums.....lb.	.55	.60	.75	.70	.75	.65
Cholesterin.....oz.	5.50	5.85	5.85	5.50	5.85	4.00
Chromium Sulfate Scales, tins .....lb.	.55	.60	.60	.55	.60	.55
Powdered tins.....lb.	.60	.65	.65	.60	.65	.6
Chrysarobin, 50 lb tins.....lb.	3.75	4.10	4.25	3.75	4.25	3.65
Cinchonine Alk, 100 oz tins.oz.	.....	.38	.38	.38	.38	.38
Crystal.....oz.	.43	.46	.68	.65	.68	.65
Sulfate, 100 oz tins.....oz.	.....	.25	.25	.25	.25	.25
Cinchonidin Sulfate, 100 oz tins .....oz.	.35	.35	.35	.35	.35	.35
Cocaine Alk, USP, 1 oz vial..oz.	.....	11.07	11.07	11.07	11.07	11.07
Hydrochloride, USP,.....oz.	.....	8.50	8.50	8.50	8.50	8.50
CODEINE Alk, 1 oz vials, 10 lots.....oz.	.....	11.87	11.87	10.37	10.37	10.37
Hydrobromide.....oz.	.....	8.92	8.92	7.42	7.92	7.42
Hydrochloride.....oz.	.....	10.87	10.87	9.37	9.87	9.37
Nitrate, oz vl 10 oz lots....oz.	.....	9.80	9.80	8.30	8.80	8.30
Phosp. oz vl, 10 oz lots....oz.	.....	9.42	9.42	7.92	8.42	7.92
Salicylate.....oz.	.....	8.25	8.25	6.75	7.25	6.75
Sulfate, oz vl, 10 oz lots...oz.	.....	9.67	9.67	8.42	8.92	8.42

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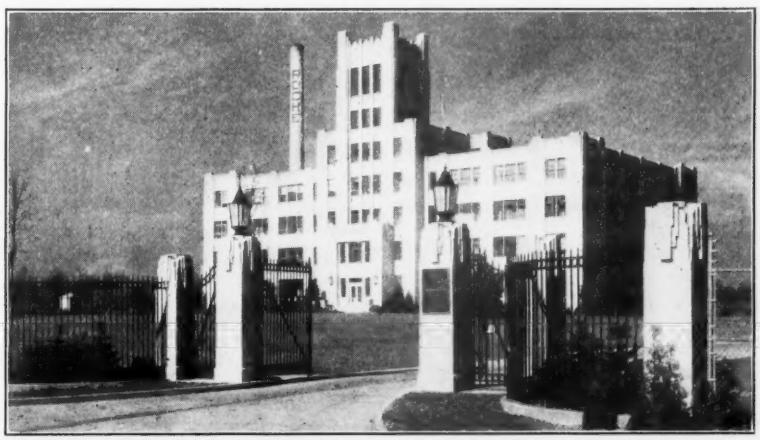

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Japanese Exports

The following is a statement of chemical, drug, and wax shipments declared at the American Consulates at Yokohama and Kobe for shipment to the United States from Japan during the first eight months of 1929, prepared from information supplied by Assistant Trade Commissioner H. B. Titus and Consul G. H. Kemper, Tokyo. (All value states in United States currency.)

	Agar-agar	*Menthol*	*Camphor Crude*	*Camphor Refined*	*Pyrethrum Flowers*	*Veg. Wax*
			Pounds			
Yokohama	6,549	27,600				
Kobe	342,976	138,400	1,741,612	1,002,165	3,775,483	1,403,194
Total	349,525	166,000	1,741,612	1,002,165	3,775,483	1,403,194
			Value			
Yokohama	$5,587	$115,137				
Kobe	294,546	573,816	$605,674	$593,023	$896,522	$292,133
Total	300,133	688,953	605,674	593,023	896,522	292,133

The total value of the products enumerated in the above table amount to $3,376,438, of which only approximately 3½ per cent., or $121,000, cleared through Yokohama. The bulk of the important Japanese drug exports destined for the United States clears through the port of Kobe. In addition to the exports from Yokohama and Kobe, there were also exported from Taihoku, Taiwan, during March, April, May, June, July, and August 182,272 pounds, 195,500 pounds, 281,479 pounds, 165,343 pounds, 72,750 pounds, and 66,137 pounds of crude camphor, valued at $66,209, $71,748, $102,290, $59,403, $26,322, and $25,278, respectively.

Iodine Imports Decrease

Imports of iodine and menthol decreased in quantity while quinine and other medicinals registered an increase during the first nine months of 1929. The following table shows the quantity and value of these products and certain other medicinals imported during the first nine months of 1928 and 1929:

	(1928 (9 Months)		*(1929 (9 Months)*	
	Pounds	*Value*	*Pounds*	*Value*
Iodine	592,000	$1,979,000	428,000	$1,500,000
Quinine sulphate (oz.)	1,210,964	438,842	1,674,570	575,177
All other quinine and (oz) alkaloids from cinchona	627,108	247,877	982,984	311,480
Other alkaloids and salts of chinchona (oz.)	.....	178,890	.....	360,111
Menthol	204,701	717,086	191,959	831,787
Antitoxins, serums, vaccines, etc.	.....	1,805	.....	1,222
Other medicinals	.....	416,620	.....	591,176
All other preparations, n. e. s.	.....	1,769,239	.....	2,093,481
Coal-tar medicinals	91,500	167,500	103,000	240,000

Java Quinine Factory Pays 30 Per Cent.

According to "De Locomotief," September 5, 1929, when 9 per cent. has been paid on the preferred capital of 3,200,000 florins and the statutory reserve has been increased by 100,000 florins so that the reserve will then be 1,089,189 florins, 30 per cent. will be paid on the ordinary shares of the Bandoeng quinine factory. The common share capital is 4,000,000 florins. (Average value of florin, $0.4022 United States currency).

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Colchicino Alk, USP, 1 oz vl.oz.	.....	20.00	20.00	20.00	20.00
Salicylate, 1 oz vls.....oz.	.....	35.50	35.50	35.50	35.50
Cream Tartar, USP, 300 lb bbls .....lb.	.27½	.27½	.28	.26½	.28	.26
Imp. powd. 224 lb bbls....lb.	.25½	.25½	.27	.25½	.27½	.25½
Creosote, USP, 42 lb cbys....lb.	.40	.42	.42	.40	.42	.40
Carbonate, 150 lb.....lb.	1.50	1.60	1.60	1.50	1.60	1.50
Cresol, USP, 400 lb drums...lb.	.....	.20	.20	.20	.20	.20
500 lb drums.....lb.	.....	.20	.20	.20	.20	.20
DIGITALIN Pure, 1 oz vial .oz	15.00	15.50	15.50	15.00	15.50	15.00
Dover's Powder, USP, 5 lb tin .....lb.	2.45	2.50	2.50	2.45	2.50	2.45
Duboisine Sulfate, 1 oz vl....oz.	.....	30.07	30.07	30.07	30.07	30.07
Emetine Alk, 15 gr vial.....oz.	.....	.85	.85	.85	.85	.85
Hydrochloride, USP, 1 oz vl .....oz.	35.00	36.00	36.00	35.00	36.00	35.00
15 grain vials.....oz.	2.50	2.70	2.70	2.50	2.70	2.50
Epsom Salts, USP, 200 lb bbls .....100 lb.	2.25	2.50	2.50	2.25	2.50	1.85
Imp. 100 lb bbls.....100 lb.	1.95	2.00	2.00	1.95	2.00	1.95
Ergotin Bonjean, 1 lb jars...lb.	18.50	19.00	19.00	18.50	21.00	15.25
Eserine Alk, 1 oz vials.....oz.	.....	50.00	50.00	50.00	40.00	40.00
Salicylate, 1 oz vials.....oz.	.....	40.00	40.00	40.00	40.00	40.00
Sulfate, USP, VIII 1 oz vials .....oz.	.....	40.00	40.00	40.00	40.00	40.00
ETHER, USP, 55 lb drums..lb.	.....	.18	.18	.18	.16	.15
Anaesthesia, 55 lb drums..lb.	.....	.23	.23	.23	.21	.20
Nitrous, 1 lb bot.....lb.	.....	.80	.98	.80	.95	.95
Ethyl Chloride, 200 lb bot...lb.	.22	.24	.24	.22	.25	.22
Ethyl Iodide, 5 lb bot.....lb.	.....	6.25	6.25	6.25	6.25	6.25
Formaldehyde, USP, 100 lb cbys lc-l wks.....lb.	.10½	.10½	.10½	.09½	.10	.07½
Gall Extract.....lb.	.20	.21	.21	.20	.21	.20
GLANDULAR SUBSTANCES						
Duodenal Substance, 1 lb lots	.....	5.50	.....	.....	.....	.....
Liver Substance (Hepatic) 1 lb lots	.....	4.50	.....	.....	.....	.....
Orchic Substance (Testicular)	.....	4.75	.....	.....	.....	.....
Ovarian Substance, whole, 1 lb lots	.....	26.00	.....	.....	.....	.....
Ovarian Residue, 1 lb lots....	.....	20.00	.....	.....	.....	.....
Pituitary Substance, whole 1 lb lots	.....	40.00	.....	.....	.....	.....
Pituitary Substance, Anterior Lobe, 1 lb lots	.....	27.00	.....	.....	.....	.....
Thyroid, U. S. P., 1 lb lots...	.....	4.75	.....	.....	.....	.....
Oxgall Powder, 1 lb lots....	.....	1.35	.....	.....	.....	.....
GLYCERIN, CP, 550 lb drums .....lb.	.....	.14	.15½	.13¾	.19	.15
Gold Chloride, bottles.....oz.	12.00	12.50	12.50	12.00	12.50	12.00
Guaiacol, liq. USP. 100 lb cbys.....lb.	1.65	1.75	1.75	1.65	2.25	1.75
Crystals.....lb	2.25	2.50	2.50	2.25	2.50	2.25
Benzoate, 1 lb bottles.....lb.	.....	13.00	13.00	13.00	3.00	13.00
Carbonate, 5 lb boxes.....lb.	1.70	2.50	2.50	1.70	2.50	1.70
Halazone, 5 lb bot.....lb.	2.75	3.25	3.25	2.75	3.25	2.75
Hexamethylenetetramine, USP, 100 lb dr.....lb.	.50	.56½	.62½	.48	.62½	.52
Homatropine Hydrobrom USP. .....oz.	.....	14.50	14.50	14.50	14.50	14.50
5 oz and 1 oz vials.....oz.		13.50	13.50	13.50	13.50	13.50
Hydrastine Alk, USP, 1 oz vial .....oz.	20.50	21.00	21.00	20.50	21.00	20.50
Hydrochlide, USP, 1 oz vials .....oz.	20.50	21.00	21.00	20.50	21.00	20.50
Sulfate, 1 oz vial.....oz.	22.50	23.00	23.00	22.50	23.00	22.50
Hydrastinine Hydrochloride, USP, 15 gr vials.....oz.	.....	40.00	40.00	40.00	40.00	40.00
Hydrogen Peroxide, USP, soln 375 lb bbls.....lb.	.03½	.04½	.04½	.03½	.05	.03½
Hyoscine Hydrobrom, USP, 1 oz vials.....oz.	.....	13.57	13.57	13.57	13.57	13.57
5 oz, 1 oz vials.....oz.	13.07	13.57	13.57	13.57	13.57	13.07
Hyoscyamine Alk, crystals, 1 oz vials.....oz.	.....	25.07	25.07	25.07	25.07	25.07
Amorphous, 1 oz vial...oz.	.....	75.07	75.07	75.07	75.07	75.07
Hydrobromide, USP, 1 oz vial .....oz.	.....	35.07	35.07	35.07	35.07	35.07
Sulfate, 1 oz vial.....oz.	.....	25.07	25.07	25.07	25.07	25.07
Hypoquinone, 100 lb kegs...lb.	.....	1.25	1.25	1.25	1.25	1.25
ICHTHYOL, tins.....lb.	4.00	4.25	4.25	4.00	4.25	4.00
Iodide Arsenous, 5 lb bot...lb.	.....	5.20	5.20	5.20	5.20	5.20
Arsenous-Mercuric soln, 5 lb bot.....lb.	.....	.26	.26	.26	.26	.26
Iodine, crude, 200 lb kegs...lb.	4.35	4.35	4.35	4.35	4.20	3.88
Resublimed, 10 lb tars....lb.	4.65	4.70	4.70	4.65	4.70	4.65
Tincture demis.....gal.	.....	4.60	4.80	4.60	4.65	4.55
Iodoform, powd 10 lb bot...lb.	.....	6.00	6.00	6.00	6.00	6.00
Iron & Ammonium Citrate, USP, 50 lb cans.....lb.	.65	.66	.66	.64	.66	.64
Chloride, USP, lump 400 lb bbls.....lb.	.06	.08	.08	.06	.08	.05½
Citrate, USP, VIII 25 lb can .....lb.	.94	1.01	1.01	.94	1.01	.94
Hypophosphite, 5 lb cans..lb.	1.55	1.65	1.65	1.55	1.65	1.55
Iodide, 1 lb bottles.....lb.	.....	4.28	4.28	4.28	4.28	4.28
Phosphate, USP, 50 lb cans .....lb.	.....	.69	.69	.69	.69	.69
& Potas Oxalate, 250 lb bbl .....lb.	.....	.45	.45	.45	.49	.45
Pyrophosphate, USP, 50 lb .....lb.	.74	.80	.80	.74	.80	.74
& Sod Oxalate, 24 lb box...lb.	.....	.30	.30	.30	.30	.30
Sulfate, USP, crys bbls....lb.	.04½	.04	.04	.04½	.04	.04½
Ferrous dried bbls.....lb.	.....	.08	.08	.08	.08	.08
Valerate, tins.....lb.	2.75	3.00	3.00	2.75	3.00	2.75

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{ *Monthly Review* }

Cod Liver Oil Price Holds

Cod liver oil remains unchanged in price at $29.00 and $30.00 for the Norwegian. Although these figures have been maintained through the Summer months, the market is not, statistically, in a strong position. Last year's production has been practically exhausted, but this year's production is reported as being plentiful both here and abroad with demand being routine.

Below is a table giving the export figures from Bergen through October for the past four years:

	Hectolitres
1926	approximately 97,000
1927	" 79,131
1928	" 65,079
1929	" 115,000

It is apparent from the above figures that exports for this year have greatly increased and when it is considered that consumption has not been abnormally large it is reasonable to assume that stocks on hand are ample to take care of any spot demand that may arise.

Potassium Iodide Still Low

Potassium iodide remains at prices below the cost of manufacture from prime iodide. However, material is still offered in the market that is recovered from the sludge remaining after the alcohol from tincture of iodine has been reclaimed for beverage purposes. There appears little likelihood of any recovery in the market as long as material from illegitimate sources continues to press for sale.

No further developments have been revealed concerning the company now producing iodine from oil well brine in California. It is reported that the capacity of the company's production is being increased, following a satisfactory working out of the process which at first necessitated rearrangement of the plant.

Spanish Olive Oil Crisis

As a result of the conference of oilve oil producers and exporters recently held in Madrid the "Economista" of November 2 points out that the crisis in the industry is due to causes beyond the confines of Spain and affects all the olive oil producing countries on the Mediterranean. It has been brought about by the excess of stocks, by the great competition of oil seeds produced outside Spain, by the falling off in purchases, owing to buyers purchasing immediate requirements only, and to the increase in the production of sulphur olive oil. The temporary permission granted for the importation of foreign oils and oil seeds has also to be taken into account. The conference proposes various measures to meet the situation, viz., the compilation of statistics and data to show world production and prices, the confining of propanganda to organized producers, advertisement among medical authorities as to the highly hygienic and alimentary properties of olive oil, the prohibition of the manufacture of oil from imported nuts, as well as other measures for the protection of the industry. "Chemist and Druggist."

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Jalap Resin, USP lumps, 5 lb tins....lb.	.....	4.00	4.00	4.00	4.00
Powdered, tins....lb.	.....	4.65	4.65	4.65	4.65
Lead Acetate, USP, 100 lb kegs ....lb.	.15	.18	.18	.15	.18	.15
Iodide, USP, VIII 5 lb bot..lb.	3.20	3.40	3.40	3.20	3.40	3.20
Lecithin, 5 oz jars....oz.	1.00	1.30	1.30	1.00	1.30	1.00
Licorice Ext Mass, cases....lb.	.19	.20	.20	.14	.20	.14½
Compound powder, bbls...lb.	.11	.13	.13	.11	.13	.11
LITHIUM CARBONATE, 250 lb bbls....lb.	1.50	1.60	1.60	1.50	1.60	1.50
Citrate, USP, 100 lb kegs..lb.	.....	1.70	1.70	1.70	1.70	1.70
Iodide, 5 lb bottles....lb.	.....	5.40	5.40	5.40	5.40	5.40
Lobeline Sulfate, ¼ oz vial...oz.	.....	8.75	8.75	8.75	8.75	8.75
Magnesium Carbonate, USP, 100 lb bbls....lb.	.....	.10½	.12	.10½	.12	.12
English, oz blocks....oz.	.16	.18	.18	.16	.18	.16
Glycerophosphate, 5 lb tins ....lb	3.20	3.25	3.25	3.20	3.25	3.20
Hypophosphite, 5 lb cans..lb	.....	1.05	1.05	1.05	1.05	1.05
Salicylate, 100 lb kegs....lb	.....	1.10	1.10	1.10	1.10	1.10
Stearate, bbls....lb.	.23	.25	.25	.23	.25	.23
Manganese Glycerophosphate, 5 lb tins....lb.	2.90	3.00	3.00	2.90	3.00	2.90
Hypophosphite, USP, VIII 5 lb cans....lb.	1.35	1.40	1.40	1.35	1.40	1.35
Iodide, 1 lb bottles....lb.	6.40	6.65	6.65	6.40	6.65	6.40
MENTHOL, USP, 60 lb cases ....lb.	4.50	4.65	6.00	4.40	6.25	4.10
Synthetic, cases....lb.	3.00	3.25	3.25	3.00	3.50	3.00
Mercury Metal, 75 lb flasks..fl.	124.00	124.50	126.00	121.50	134.00	120.00
Bichloride, crys 25 lb box..lb.	.....	1.81	1.81	1.81	1.81	1.81
Gran powd, 100 lb kegs..lb.	.....	1.65	1.65	1.65	1.65	1.65
Bisulfate, 25 lb boxes....lb.	.....	1.62	1.62	1.62	1.62	1.62
Blue Mass, 25 lb boxes....lb.	.....	1.03	1.03	1.03	1.03	1.03
Powd, 25 lb boxes....lb.	.....	1.04	1.04	1.04	1.04	1.04
Blue Ointment, USP, 50%, 25 lb cans....lb.	.....	1.29	1.29	1.29	1.29	1.29
Mild 30%, 25 lb cans....lb.	.....	.92	.92	.92	.92	.92
33 1/3% mercury....lb.	.....	.94	.94	.94	.94	.94
Calomel, 50 lb boxes....lb.	.....	2.05	2.05	2.05	2.05	2.05
English....lb.	2.75	2.80	2.80	2.75	2.80	2.75
Iodide, green, 25 lb jars....lb.	.....	4.80	4.80	4.80	4.80	4.80
Red, USP, 25 lb jars...lb.	.....	4.89	4.89	4.89	4.89	4.89
Yellow, USP, VIII, 25 lb jars....lb.	4.80	4.80	4.80	4.80	4.80	4.80
Red precip, USP, 25 lb boxes ....lb.	2.17	2.17	2.17	2.17	2.17	2.17
Powd., USP, 25 lb boxes.lb.	2.17	2.17	2.17	2.17	2.17	2.17
White precip, USP, 25 lb boxes....lb.	.....	2.20	2.20	2.20	2.20	2.20
Powd., USP, 25 lb boxes.lb.	.....	2.25	2.25	2.25	2.25	2.25
Salicylate, 25 lb bot....lb.	.....	2.32	2.32	2.32	2.32	2.32
With chalk, USP, 25 lb boxes ....lb.	.....	.93	.93	.93	.93	.93
Methanol, Pure 1c-1 drs....gal.	.....	.57	.57	.57	.60	.48
Methyl Salicylate, USP, 50 lb cans....lb.	.40	.42	.45	.40	.45	.42
Methylene Blue, USP, med 5 lb cans....lb	2.00	2.05	2.05	2.00	2.05	2.00
Milk powd, 150 lb bbls....lb.	.14	.15	.15	.14	.15	.14
MORPHINE Alk, 5 oz tin...oz.	.....	11.35	11.35	9.85	10.15	9.85
Acetate, 5 oz tins....oz.	.....	9.35	9.35	7.85	8.25	7.85
Hydrobromide, 5 oz tins, 10 oz lots....oz.	.....	9.35	9.35	7.85	8.35	7.85
Hydrochloride, 5 oz tins, 10 oz lots....oz.	.....	9.25	9.25	7.85	8.35	7.85
Ethyl Hydrochloride, 5 oz tins 10 oz lots....oz.	.....	10.85	10.85	9.35	9.85	9.35
Sulfate, 5 oz tins, 10 oz lots ....oz.	.....	8.85	8.85	7.85	8.35	7.85
Naphthalene Flake, 175 lb bbls wks....lb.	.04½	.05	.05	.04½	.05	.04½
Balls, 250 lb bbls wks....lb.	.05½	.06	.06	.05½	.06	.05½
Oxgall, Purified, 5 lb bot....lb.	1.75	2.50	2.50	1.75	2.50	1.75
USP, 5 lb bot....lb.	2.00	2.50	2.50	2.00	2.50	2.00
Oxyquinoline Sulfate, tins...lb.	8.50	9.25	9.25	8.50	9.25	8.50
Pancreatin, USP, 100 lb....lb.	.....	1.90	1.90	1.90	.....	.....
Paraffin, refd, 200 lb cs slabs 118 -120 deg MP....lb.	.08	.09	.09	.08	.09	.08
128-132 deg MP....lb.	.07½	.07½	.07½	.07½	.07½	.07½
Para-Aldehyde, USP, 100 gal drums....lb.	.67	.77	.77	.67	.77	.67
Pepsin, USP, 100 lbs. 1:3000.lb.	.....	2.25	2.25	2.25	2.50	2.50
100 lbs. 1:6000....lb.	.....	4.00	4.00	4.00	5.00	5.00
100 lbs. 1:10000....lb.	.....	6.50	6.50	6.50	8.35	8.35
Peptone, powd, 5 lb bot....lb.	.....	.....	.....	.....	.....	.....
PHENOLPHTHALEIN, USP, 100 lb drums....lb.	1.10	1.20	1.20	1.10	1.20	1.10
5 lb cans 100 lb lots..lb.	1.23	1.30	1.30	1.23	1.30	1.23
Pilocarpine Hydrochloride, USP, 1 oz vials 25 oz lots ....oz.	.....	3.25	3.25	3.25	3.25	3.25
Nitrate, 25 oz lots....oz.	.....	3.25	3.25	3.25	3.25	3.25
Single ounce....oz.	.....	3.50	3.50	3.50	3.50	3.50
Alkaloid, 15 gr vials....vl.	.....	.75	.75	.75	.75	.75
Piperazine Hydrate, 1 lb bot.lb.	.....	15.00	15.00	15.00	15.00	15.00
Piperadine, 25 oz bottles....lb.	.....	8.00	8.00	8.00	8.00	8.00
Popodhyllin 5 lb bottles....lb.	4.35	4.50	4.50	4.35	4.50	4.35
Potassium Acetate, USP, 100 lb kegs....lb.	.29	.30	.30	.29	.30	.29
Bicarb, USP, crys 320 lb bbls ....lb.	.13	.13½	.13½	.08½	.09	.08½
Bromide, USP, crys 100 lb cs ....lb.	.42	.43	.40	.39	.43	.42
Citrate, USP, 50 lb bbl....lb.	.51	.53	.55	.51	.55	.51
Guaiacol Sulfonate....lb.	1.95	2.25	2.25	1.95	2.25	1.95

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{ Monthly Review }

Mercury in Much Firmer Position

Mercury is firmer in tone due to one increase in price on the part of the Spanish-Italian monopoly, and further increase expected to follow. The statistical position of mercury is better than it has been from the point of view of the sellers. Sales of quicksilver the syndicate are reported to have reached 21,000 flasks during October and November, while during the whole previous year the monopoly sold a total of only 3,800 flasks.

This condition has been brought about by the fact that the English holders of stocks are down to about 15,000 flasks which they are not anxious to sell due to the fact that the monopoly is evidently interested in pushing the market higher.

While the monopoly still has very heavy stocks which will not be consumed at the present rate of consumption if production is maintained at current levels, the fact that the entire market is now open to the monopoly and the fact that the metal is now moving, has given them a much stronger feeling.

It is interesting to note that the syndicate has inaugurated a contest for new uses of mercury with a first prize of £5,000. The syndicate states that the newer uses, such as the mercury boiler and the mercury vapor tubes, have done little more than offset the loses in the color and instrument manufacturing industries.

Mercury is quoted spot $124 to $125.50 per flask. Price for shipment, however, is higher but as there has been little demand in the market here price has not increased in sympathy with the primary market.

Value of Spain's Shipments

Declared exports from Spain through the port of Alicente of essential oils and crude drugs for the quarter ended September 30, 1929, were valued at approximately $21,000 and consisted of the following:

	Pounds	Value
Anise seed	5,548	$707
Thyme leaves	21,536	909
Ericacea leaves	28,371	1,130
Lavender oil	16,095	9,522
Quince pulp	4,690	362
Rosemary oil	15,867	6,146
Saffron	301	2,787
Sage oil	549	261
Thyme oil	1,202	1,175

Alicente is the principal Spanish port through which essential oils are exported to the United States, followed by Seville, Malaga, Valencia, Barcelona, and Taragona, in the order named. Total exports of essential oils from Spain to the United States during 1927, 1928, and the first quarter of 1929 were valued at $213,000, $202,000, and $51,000, respectively. (Vice Consul Manuel J. Codoner, Alicente and Commercial Attache C. A. Liven good, Madrid).

Croton oil is very much higher at $2.75 and $2.80 with practically no supplies in the market. There is no material for shipment from either Austria or Germany where the bulk of this product is obtained and a firm price may be expected for the future.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Potassium Hypophosphite, 10 lb. cans lb.	.80	.85	.85	.80	.85	.80
Iodide, USP, 100 lb cases lb.	3.25	3.30	3.55	3.25	3.80	3.25
Lactophosphate, 4 ox bot lb.	.....	.90	.90	.90	.90	.90
Permangan, USP, crys, 100 lb drs wks lb.	.15	.15½	.15½	.15	.16½	.14½
Phosphate dibasic pure, kegs lb.	.....	.49	.49	.49	.49	.49
Salicylate, 25 lb cans lb.	.....	1.18	1.18	1.18	1.18	1.18
Sulfate, USP, VIII, 100 lb kegs lb.	.13	.15	.15	.13	.15	.13
Sulfocyanide, CP 15 lb jars lb.	.....	.50	.50	.50	.50	.50
Tartrate, CP, tins lb.	.....	.65	.65	.65	.65	.65
Pyrogallol, USP, see Acid Pyrogallic	.....	.....	.....	.....	.....	.....
Quinidine Alk, 100 oz tins oz.	.70	.75	.75	.70	.75	.70
Sulfate, 100 oz tins oz.	.....	.50	.50	.50	.50	.50
QUININE SULFATE, USP, 100 oz tins oz.	.....	.40	.40	.40	.40	.40
1 oz tins, 100 oz lots oz.	.....	.47	.47	.47	.47	.47
Dutch, 100 oz tins oz.	.....	.40	.40	.40	.40	.40
Java, 100 oz. tins oz.	.....	.40	.40	.40	.40	.40
Japanese 100 oz tins oz.	.....	.40	.40	.40	.40	.40
Acetate oz.	.....	.78	.78	.78	.78	.78
Arsenate oz.	.....	.78	.78	.78	.78	.78
Benzoate oz.	.....	.78	.78	.78	.78	.78
Bisulfate, USP oz.	.....	.40	.40	.40	.40	.40
Resale oz.	.....	.39	.39	.37	.39	.37
Citrate oz.	.....	.51	.51	.51	.51	.51
Dicarbonate, 1 oz tins oz.	.....	2.56	2.56	2.56	2.56	2.56
Dihydrobromide oz.	.....	.54	.54	.54	.54	.54
Dihydrochloride, USP oz.	.....	.54	.54	.54	.54	.54
Ethyl Carbonate, 16 oz tins oz.	.....	.58	.58	.58	.58	.58
Ferrocyanide oz.	.....	.78	.78	.78	.78	.78
Formate oz.	.....	.73	.73	.73	.73	.73
Glycerophosphate oz.	.....	.80	.80	.80	.80	.80
Hydrobromide, USP oz.	.....	.50	.50	.50	.50	.50
Hydrochlorosulfate oz.	.....	.54	.54	.54	.54	.54
Hydrochloride & Urea, USP oz.	.....	.74	.74	.74	.74	.74
Hypophosphite oz.	...	.70	.70	.70	.70	.70
Lactate oz.	.....	.66	.66	.66	.66	.66
Phenolsulfonate oz.	.....	.78	.78	.78	.78	.78
Phosphate oz.	.....	.62	.62	.62	.62	.62
Salicylate, USP oz.	.....	.52	.52	.52	.52	.52
Tannate, USP oz.	.....	.41	.41	.41	.41	.41
Tartrate oz.	.....	.78	.78	.78	.78	.78
Valerate oz.	.....	.78	.78	.78	.78	.78
& Urea Hydrochloride, USP oz.	.....	.88	.88	.88	.88	.88
Rennet, N. F. 5 lb 1:25,000 lb.	2.95	3.50	3.50	2.95	3.50	2.95
Resorcinol, USP, 25 lb cans lb.	1.60	1.65	1.75	1.65	2.00	1.70
Rochelle Salt, USP, 225 lb bbl lb.	.23	.23½	.23½	.23	.23½	.23
Imp. USP, 300 lb bbls lb	.....	.23	.23	.23	.23	.23
Rock Sugar, 5 lb boxes lb.	.....	.15	.15	.15	.15	.15
Saccharin, USP, 10 lb cans lb.	1.70	1.80	1.80	1.70	1.80	1.70
USP, Soluble, 10 lb cans lb.	1.75	1.85	1.85	1.75	1.85	1.75
Salicin, USP lb.	.....	9.31	9.31	4.86	4.86	4.86
SALOL, USP, 100 lb drums lb.	.....	.90	.90	.90	.90	.90
Saltpetre, powd, bbls wks lb.	.06¼	.08¼	.08¼	.06¼	.08¼	.06¼
Santonin, USP, bulk lb.	.....	129.50	129.50	129.50	145.00	129.50
Saponin, refined lb.	1.30	1.50	1.50	1.30	1.50	1.30
Siedlitz Mixture, 250 lb bb lb.	.....	.....	.....	.....	.....	.....
Silver Metal, American oz.	.....	.57½	.57½	.57½	.60¼	.57½
Iodide, 16 oz lots oz.	.....	.69	.69	.69	.69	.69
Nitrate, 100 oz bottles oz.	.40½	.42½	.42½	.40½	.45	.40½
Nucleinate, bulk oz.	.....	.37	.37	.37	.37	.37
Proteinate oz.	.....	.32	.32	.32	.32	.32
SODIUM BENZOATE, USP, 100 lb bbls lb.	.45	.49	.49	.45	.55	.50
Bromide, USP, 100 lb kegs lb.	.42	.43	.43	.42	.43	.42
Cacodylate, USP, 25 lb bot lb.	4.75	5.90	5.90	4.75	6.10	4.75
Citrate, USP, X 50 lb kegs lb.	.45	.47	.47	.45	.47	.45
USP VIII, 50 lb kegs lb.	.38	.40	.40	.38	.40	.38
Glycerophosphate, USP, crys 25 lb cans lb.	1.40	1.55	1.55	1.40	1.55	1.40
Powder, 25 lb tins lb.	1.45	1.60	1.60	1.45	1.60	1.45
Soln, USP, 25 lb tins lb.	1.05	1.20	1.20	1.05	1.20	1.05
Hypophosphite, USP, 25 lb cans lb.	.70	.75	.75	.70	.75	.70
Iodide, USP, 25 lb jars lb.	4.25	4.30	4.30	4.25	4.30	4.25
Phosphate (Mono-Sodium), 100 lb kegs lb.	.30	.31	.31	.30	.31	.30
Di-Sodium USP, granular, 275 lb bbls lb.	.07½	.08	.08	.07½	.08	.07½
Pyrophosphate, 100 lb kegs lb.	.....	.29	.29	.29	.29	.29
Salicylate, 100 lb kegs lb.	.....	.47	.47	.47	.47	.47
Sulfocarbolate, USP, 100 lb kegs lb.	.....	.31	.31	.31	.31	.31
Sulfocyanate, CP crys, jars included lb.	.....	.60	.60	.60	.60	.60
Spartein Sulfate, USP, 25 oz bulk oz.	.65	.70	.70	.60	.70	.60
Single oz vial oz.	.77	.90	.90	.77	.90	.77
STRONTIUM BROMIDE USP, 50 lb kegs lb.	.51	.52	.52	.51	.52	.51
Carb, 100 lb kegs wks lb.	.....	.20	.20	.20	.20	.20
Iodide, USP, 25 lb jars lb.	.....	4.00	4.00	4.00	4.00	4.00
Lactate, kegs lb.	.90	1.10	1.10	.90	1.10	.90
Nitrate, 600 lb bbls NY lb.	.08	.08½	.08½	.08	.08½	.08
Imp. bbls NY lb.	.08	.08½	.08½	.08	.08½	.08
Salicylate, USP, 100 lb keg lb.	.....	1.10	1.10	1.10	1.10	1.10

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{ Monthly Review }

Essential Oil Import Changes

Essential oil import statistics for 1929 show many interesting changes. The total value of essential oils imported during the first nine months of 1929 amounted to $5,807,600, against $5,002,000 for the same period of 1928.

Eight of the ten classes that go to make up this classification experienced an increase in value, the two exceptions being geranium and bergamot. The import value of the latter fell from $5.08 to $4.70 a pound. Cassia and cinnamon attar of roses, lavender and spike lavender registered substantial increases in both quantity and value as did those oils enumerated under the general classification, "all other essential and distilled oils." While representing the smallest quantity and value of any of the oils under discussion, it is of interest to know that sandalwood imports were more than double in quantity and quadruple in value. Citronella and lemon grass oil showed a quantity decrease of nearly 50,000 pounds but an increase in value of $42,000. The citrus oils, lemon and orange, are the most interesting in that the former, although decreasing 139,000 pounds, increased $68,500 in value, or an increase per pound in import value from $2.09 to $3.30. While orange oil imports increased only 9,000 pounds, there was an increase in value of $183,000, or from approximately $3.58 to $4.60 per pound import value. The following table shows the quantities and values of essential oil imports for the first seven months of 1928 and 1929.

	9 Months, 1928		*9 Months, 1929*	
	Pounds	*Value*	*Pounds*	*Value*
Cassia and cinnamon	200,812	$229,930	267,979	$381,284
Geranium	156,826	468,411	60,095	262,826
Attar of roses (oz.)	26,818	275,348	42,864	325,330
Bergamot	84,722	430,416	80,292	377,864
Citronella and lemon grass	1,117,458	442,292	1,068,466	484,374
Lavender and spike lavender	169,930	415,224	224,283	563,839
Lemon	436,331	914,559	297,323	983,070
Orange	139,004	498,001	148,253	681,589
Sandalwood	8,179	22,195	18,479	87,112
Other essential and distilled oils	2,772,441	1,305,389	3,427,203	1,660,270

Essential Oil Imports

Exports of orange oil for September amounted to 1,345 pounds, valued at $6,214, making the total for the first nine months of 1929, 40,300 pounds, valued at $150,000. Exports of peppermint oil for the first tine months of 1929 increased to 154,550 pounds, valued at $560,000, against 115,356 pounds, valued at $391,000, for a similar period during 1928. Exports of all other essential oils for the first 9 months of the current year amounted to 1,725,000 pounds, valued at $942,00.

Almond sweet is easier at 65c and 68c per lb. Lower figures prevailing in the primary market and a marked tendency to better production is responsible for the decrease in price of this commodity.

Cardamon is firm at $26.00 to $39.00 per lb. This represents an increase in price of $1 per lb. during the past month.

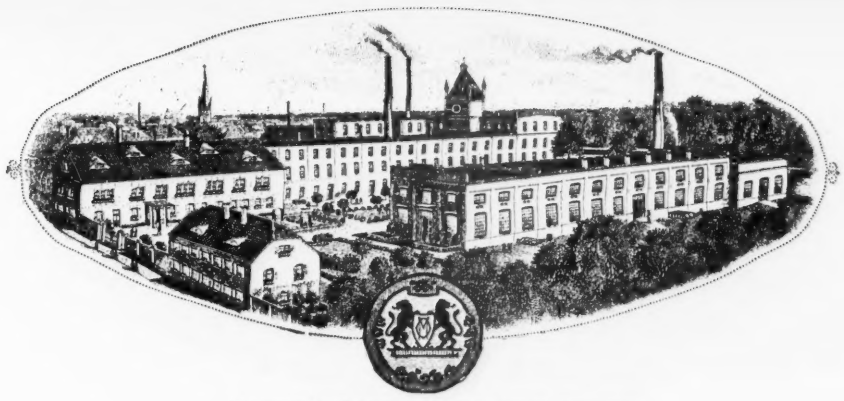
	Current Market	1929 High	1929 Low	1928 High	1928 Low
Strophanthin, USP, 1 oz vial	oz.	19.00	19.00	19.00	19.00
Crystals	lb.	75.00	75.00	75.00	75.00
Strychnine Alk, USP crys, 100 oz tins	oz.	.61	.66	.61	.66	.56
Powdered	oz.	.51	.56	.51	.56	.46
Acetate	oz.	.65	.65	.65	.65	.55
Arsenate, 25 oz cans	oz.	.65	.65	.65	.65	.55
Glycerophosphite, USP	oz.	.65	.65	.65	.65	.55
Hydrobromide	oz.	.65	.65	.65	.65	.55
Hydrochloride	oz.	.65	.65	.65	.65	.55
Hypophosphite	oz.	.75	.75	.75	.75	.65
Nitrate, USP	oz. .55	.72	.72	.55	.72	.52
Phosphate	oz.	.65	.65	.65	.65	.55
Sulfate, USP, powd	oz.	.42	.56	.42	.56	.38
Sugar, refined, 275 lb bbl 100 lb	5.80	5.90	5.90	5.80	5.90	5.80
Milk, USP, 200 lb bbls	lb. .18	.20	.20	.18	.20	.18
Sulfonethylmethane, USP, 10 lb boxes	lb. 3.85	4.05	4.05	3.85	4.05	3.85
Sulonmethane, USP, 10 lb box	lb. 2.65	3.85	3.85	2.65	3.85	2.65
Sulfur flwrs. washed, USP, 125 lb bbl	lb.	.06	.06	.06	.06	.06
Iodide, USP, VIII, 5 lb bot	lb.	4.55	4.55	4.55	4.55	4.55
TARTAR EMETIC, USP, 300 lb bbls	lb. .29	.31	.31	.29	.36	.32½
Terebene, tins	lb.	.85	.85	.85	.85	.85
Terpin Hydrate, USP, 100 lb kegs	lb. .40	.42	.42	.40	.47	.40
Theobromine Alk, 5 lb cans	lb. 1.90	2.25	2.25	1.90	2.25	1.90
Sod. Salicylate, 1 lb bot	lb.	2.10	2.10	2.10	2.10	2.10
Sod. Benzoate, 1 oz vials	oz.	1.00	1.00	1.00	1.00	1.00
Thymol, USP, 25 lb tins	lb. 2.55	2.70	2.70	2.25	2.75	2.25
Iodide kegs	lb. 6.00	7.00	7.00	6.00	7.00	6.50
Veratrine Alkaloid	oz.	2.25	2.25	2.25	2.25	2.25
Sulfate, 1 oz vials	oz.	2.25	2.25	2.25	2.25	2.25
Witch Hazel Ext., 50 gal bbl	gal. .80	1.00	1.00	.80	1.00	.80
Zinc Carb, USP, 100 lb keg	lb. .28	.31	.31	.28	.31	.28
Chloride, USP, 25 jars ex	lb. .24	.29	.29	.24	.29	.24
Iodide, 5 lb bottles	lb.	5.22	5.22	5.22	5.22	5.22
Oxide, USP, 100 lb bbls	lb. .16½	.17½	.18	.16½	.18	.17
Stearate, USP, 50 lb bbl	lb. .24	.26	.26	.24	.26	.22
Sulfate, USP, 100 lb bbl	lb. .08	.09	.09	.08	.09	.08
Sulfocarbolate, 100 lb kegs	lb. .23	.29	.29	.23	.29	.29

Natural Derivatives

Anethol, 2 lb bot	lb. 1.25	1.30	1.30	1.25	1.30	1.25
Borneol, 1 lb bot	lb. 2.40	2.50	2.50	2.40	2.60	2.40
Carvol, 5 lb bot	lb. 3.50	3.60	3.60	3.50	2.85	3.50
Citral, 25 lb cans	lb. 2.70	2.75	2.75	2.70	2.75	2.70
Citronellal, 1 lb bot	lb. 2.70	2.75	2.75	2.70	3.25	2.70
Eucalyptol, USP, 50 lb cans	lb. 1.00	1.05	1.05	1.00	1.05	1.00
Eugenol, USP, 25 lb cans	lb. 2.70	2.75	2.75	2.70	2.90	2.70
Geraniol, domestic, 50 lb cases	lb. 2.50	2.70	2.70	2.50	2.70	2.50
Imported, 5 lb bot	lb. 2.90	3.10	3.10	2.90	3.10	2.90
Iso-Eugenol, 1 lb bot	lb. 3.75	3.80	3.80	3.75	4.50	3.75
Imported, 1 lb bot	lb. 3.70	3.80	3.80	3.70	3.80	3.70
Linalol from Bois de Rose, 5 lb bot	lb. 3.20	3.25	3.25	3.20	3.25	3.00
Rhodinol, 1 lb bot	lb. 7.50	7.75	7.75	7.50	7.75	6.00
Saffrol, drums	lb.	.27	.27	.27	.27	.27
60 lb cans	lb.	.29	.29	.29	.29	.29

Synthetic Aromatics

Acetophenene, CP, 1 lb bot	lb. 3.50	3.65	3.65	3.50	3.75	3.50
Aldehyde, C 8 (Otcyl) 1 lb bot	lb.	50.00	55.00	50.00	55.00	55.00
C 7, 1 lb bot	lb. 4.50	5.50	5.50	4.50	5.50	4.50
C 9 (Nonyl), 1 lb bot	lb.	140.00	140.00	140.00	140.00	140.00
C 10 (Decyl), 1 lb bot	lb.	48.00	48.00	48.00	48.00	48.00
C 14, 1 lb bot	lb.	32.00	32.00	22.50	25.00	22.50
C 16, 1 lb bot	lb.	24.00	32.00	24.00	80.00	31.00
Aubepine, see Anisic Aldehyde						
AMYL ACETATE, pure, 5 gal cans	gal. 5.50	6.85	6.85	4.75	5.50	4.75
Butyrate, 1 lb bot	lb. 1.70	1.75	1.75	1.70	1.90	1.70
Butyrate, 5 lb bot	lb.	1.75	1.75	1.75	1.75	1.75
Cinnamate, 5 lb bot	lb. 9.50	9.75	9.75	9.50	9.75	9.50
Formate, 1 lb bot	lb.	1.90	1.90	1.90	1.90	1.90
Formate, 5 lb bot	lb.	1.75	1.75	1.75	1.75	1.75
Phenyl Acetate, 1 lb bot	lb. 4.50	5.00	5.00	4.50	5.00	4.50
Salicylate, 100 lb cbys	lb. 1.25	1.30	1.30	1.25	1.30	1.25
Imported	lb. 2.25	2.50	2.50	2.25	2.50	2.25
Anisic Aldehyde, 1 lb bot	lb. 3.00	3.25	3.25	3.00	3.25	3.00
Benzaldehyde, USP, 40 lb cbys	lb.	.....	.....	.....	.....	.....
50 lb cbys	lb. 1.25	1.35	1.35	1.25	1.35	1.25
FFC, 40 lb cbys	lb. 1.35	1.45	1.45	1.35	1.45	1.35
Benzoic Ether, see Ethyl Benzoate						
Benzophenone, 1 lb bot	lb. 4.50	5.00	5.00	4.50	5.00	4.50
Benzyl Acetate, 100 lb cbys	lb. .90	1.10	1.10	.90	1.10	.90
Alcohol, 5 lb bot	lb. 1.25	1.35	1.35	1.25	1.35	1.25
Benzoate, 5 lb bot	lb. 1.05	1.15	1.35	1.05	1.35	1.25
BENZYL BENZOATE	1.35	1.40	1.40	1.35	1.40	1.35
Medicinal, FFC	lb.	1.40	1.40	1.40	1.40	1.40
Buytrate, CP, 1 lb bot	lb. 9.25	9.50	9.50	9.25	9.50	9.25



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{ Monthly Review }

Vanillin Remains Steady

Vanillin has been quite firm in price with manufacturers apparently well in control of the market. Demand has been of goodly proportions from the various consuming channels.

The two varieties of vanillin—that is the material made from clove oil and that made from guiacol—have, in some instances been sold at different prices. That is the guiacol material sold at 25c per pound less than the clove oil material. While this practice has not been general and there is no indication when, if at all, it will become general, it has existed on many occasions.

Ethyl vanillin is offered by many manufacturers and is also quite firm in price. This product is rapidly finding its place among the consuming trade, and is replacing vanillin in some instances, while in other cases vanillin is preferred.

Terpineol Prices Lower

Competition from imported terpineol has been quite severe as regards prices. This has finally forced the American manufacturers of the product to reduce their prices effectively December 11 to a basis of 27 cents per pound for 10 drum lots, 28 cents per pound for 5 drum lots, and 29 cents per pound for single drums.

Anise Position Strong

Anise is in a strong position, prices being quoted on spot at 78c to 83c per lb. A marked firmer tone for shipment is noted. As this product comes from the interior of China great difficulty is being experienced in getting it out due to the political unrest in that country. There is not very much stock in the spot market and there is every likely hood that a strong tone will prevail for some time to come.

Bergamot Declines

Bergamot is lower on spot at $3.50 and $3.90 as to quantity. This is a reduction in price of approximately 50c per lb. during the past month. Price for shipment is still lower so that prices here will probably recede to still lower levels. This is the season for new crop oil so that a recession at this time is usually looked for. Bergamot usually acts in sympathy with the citrus oils which have been weak in tone.

Clove oil is lower at $1.95 to $2.00. This commodity has been weak in tone ever since March of this year when spot quotations were made at $2.65 per lb. A steadier undertone, however, has been noticeable due to strength in the raw material market. There is every likelihood that price has now been stabilized at these figures.

Sandalwood continues strong being quoted in this market at $9.35 per lb. Replacement stocks are not arriving freely and only the presence in the hands of resellers of sufficient stocks to meet ordinary demand prevents prices from going to still higher levels.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Benzyl Cinnamate, 1 lb bot. lb.	9.25	9.50	9.50	9.25	9.50	9.25
Formate, 1 lb bot.....lb.	3.15	3.25	3.25	3.15	3.75	3.15
Propionate, 1 lb bot.....lb.	3.60	3.75	3.75	3.60	3.75	3.60
Succinate, 1 lb bot.....lb.	5.25	5.50	5.50	5.25	5.50	5.25
Valerate, 5 lb bot.....lb.	3.00	3.25	3.25	3.00	3.25	3.00
Bornyl Acetate, 1 lb bot....lb.	2.90	3.00	3.00	2.90	3.25	2.90
Bromstyrol, 25 lb cases....lb.	4.10	4.25	4.25	4.10	5.00	4.10
Butyl Anthranilate dom, 1 lb bot.....lb.						
Butyric Ether, see Ethyl Butyrate.....						
Cinnamic Acid, 5 lb cans....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Alcohol liquid, 1 lb bot...lb.	3.25	3.35	3.35	3.25	3.50	3.25
Crystallizable.....lb.	7.00	8.00	8.00	7.00	8.00	7.00
Aldehyde.....lb.	2.25	2.50	2.50	2.25	2.50	2.25
Imported, 1 lb bot.....lb.	7.75	9.00	9.00	7.75	9.00	7.75
Citronelyl Acetate, 1 lb bot. lb.	7.75	8.00	8.00	7.75	8.00	7.75
Coumarin, 25 lb cans.....lb.	3.50	4.00	4.00	3.50	4.0C	3.50
DECYL ALCOHOL.....lb.	25.00	28.00	28.00	25.00	28.00	25.00
Diethyl Phthlate see Chemicals						
Diphenyloxide, 25 lb tins....lb.	1.00	1.15	1.15	1.00	1.15	1.00
Diphenyl Methane.....lb.	1.50	1.75	1.75	1.50	1.75	1.50
Duodecyl Alcohol.....lb.	20.00	22.00	22.00	20.00	22.00	20.00
Ethyl Acetate, pure, 5 lb bot. lb.	.45	.50	.50	.45	.50	.45
Benzoate, 5 lb bot.....lb.	1.50	1.75	1.75	1.50	1.75	1.50
Ethyl Butyrate, 5 lb bot....lb.	1.80	2.00	2.00	1.80	2.00	1.80
Caproate, 1 lb bot.....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Cinnamate, 1 lb bot.....lb.	4.00	4.50	4.50	4.00	4.50	4.00
Formate, 5 lb bot.....lb.	1.00	1.25	1.25	1.00	1.25	1.00
Methyl Paracresol, 1 lb bot .....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Phenyl Acetate, 5 lb bot..lb.	3.75	4.00	4.00	3.75	4.00	3.75
Valerate, 5 lb bot.....lb.	.....	3.75	3.75	3.75	3.75	3.75
Salicylate, 5 lb bot.....lb.	1.95	2.00	2.00	1.95	2.10	1.95
Formic Ether see Ethyl Formate						
Geranyl Acetate, 1 lb bot....lb.	3.20	3.25	3.25	3.20	3.25	3.20
Butyrate, 1 lb bot.....lb.	13.00	13.50	13.50	13.00	13.50	13.00
Formate, 1 lb bot.....lb.	12.00	12.50	12.50	12.00	12.50	12.00
Glyco Ester.....lb.	.90	1.00	1.00	.90	1.00	.90
Heliotropin, 100-10 lbs.....lb.	1.65	1.75	1.75	1.65	1.75	1.65
Imported.....lb.	1.95	2.05	2.05	1.95	2.05	1.95
Hydroxycitronellal, 1 lb.....lb.	5.50	7.50	7.50	5.50	7.50	5.50
Indol, CP, 1 oz bot.....oz.	2.90	3.00	3.00	2.90	4.50	2.90
IONONE, 1 lb bot 100%...lb.	5.00	6.00	6.00	5.00	7.00	5.00
Alpha.....lb.	4.80	5.00	5.20	4.80	6.25	4.75
Beta.....lb.	5.70	5.75	5.75	5.70	7.25	5.50
Methyl.....lb.	5.75	6.00	6.00	5.75	7.25	5.75
Iso Borneol.....lb.	2.15	2.25	2.25	2.15	2.25	2.15
Iso Bornyl Acetate.....lb.	2.80	3.00	3.00	2.80	3.00	2.80
Iso-Butyl Benzoate, 5 lb bot. lb.	2.75	3.00	3.00	2.75	3.00	2.75
Iso-Safrol, 1 lb bot imp.....lb.	1.65	1.75	1.75	1.65	1.75	1.65
Domestic, 5 lb bot.....lb.	3.50	3.75	3.75	3.50	3.75	2.50
Lynalyl Acetate, 1 lb bot....lb.	3.25	4.25	4.25	3.25	4.50	3.25
Benzoate, 1 lb bot.....lb.	13.00	14.00	14.00	13.00	14.00	13.00
Formate, 5 lb bot.....lb.	10.50	12.00	12.00	10.50	12.00	10.50
METHYL ACETOPHENONE .....lb.	3.35	3.50	3.50	3.35	3.75	3.35
Anthranilate, 1 lb bot.....lb.	2.40	2.45	2.45	2.40	2.45	2.40
Imported.....lb.	2.70	2.75	2.75	2.70	2.75	2.70
Anthranilic Acid.....lb.	11.75	12.00	12.00	11.75	12.00	11.75
Benzoate, 5 lb bot imp....lb.	1.75	1.85	1.85	1.75	2.00	1.75
Domestic, 5 lb bot.....lb.	1.75	2.00	2.00	1.75	2.00	1.75
Cinnamate, 1 lb bot.....lb.	3.75	4.25	4.25	3.75	4.25	3.75
Heptenone, 1 lb bot.....lb	8.50	9.00	9.00	8.50	9.00	8.50
Paracresol, 1 lb bot.....lb	4.50	8.00	8.00	4.50	8.00	4.50
Phenylacetate, 5 lb bot...lb	3.75	4.00	4.00	3.75	4.00	3.75
Salicylate, USP, 500 lb dr .lb.	.....	.40	.40	.40	.40	.40
50 lb cases.....lb.	.....	.42	.42	.42	.42	42
Mirbane rect, 1,000 lb drs...lb.	.12	.13	.13	.12	.13	12
Musk Ambrette 1 lb cans....lb	6.50	6.75	6.75	6.50	6.75	6.50
Ketone 1 lb cans.....lb	8.00	8.15	8.15	8.00	8.15	8.00
Xylene 5 lb cans.....lb.	2.25	2.35	2.35	2.25	2.35	2.25
Nerolin 1 lb cans.....lb.	1.35	1.40	1.40	1.35	1.50	1.35
Octyl Alcohol 1 lb bot.....lb.	30.00	32.00	32.00	30.00	32.00	30.00
Oenanthic Ether lb bot.....lb.	1.90	2.00	2.00	1.90	2.00	1.90
Paracresol Methyl Ether....lb.	6.50	6.75	6.75	6.50	6.75	6.50
Paracresyl Acetate.....lb.	5.50	5.75	5.75	5.50	5.75	5.50
Para Cymene Refd 110 gal dr .....gal.	2.25	2.50	2.50	2.25	2.50	2.25
PHENYLACETALDEHYDE 50% 1 lb bot.....lb.	4.75	5.00	5.00	4.75	7.50	4.75
Imported 50%.....lb.	4.75	5.00	5.00	4.75	6.50	4.75
100%.....lb.	8.00	8.25	8.25	8.00	8.25	8.00
Phenylacetic Acid 1 lb bot..lb.	3.00	3.25	3.25	3.00	3.25	3.00
Phenyl Diacetate 1 oz bot...oz.	3.00	3.25	3.25	3.00	3.25	3.00
1 lb bot.....lb.	8.00	10.00	10.00	8.00	10.00	8.00
Imported.....lb.	7.00	7.75	7.75	7.00	7.75	7.00
Phenylethyl Alcohol 1 lb bot.lb.	4.50	4.75	4.75	4.50	4.75	4.50
Phenyl Ethyl Acetate.....lb.	8.25	8.75	8.75	8.25	8.75	8.25
Butyrate 1 lb bot.....lb.	15.00	16.00	16.00	15.00	16.00	15.00
Formate, 1 lb bot.....lb.	19.00	21.00	21.00	19.00	21.00	19.00
Propionate, 1 lb bot.....lb.	16.00	18.00	18.00	16.00	18.00	16.00
Valerate, 1 lb bot.....lb.	19.00	20.00	20.00	19.00	20.00	19.00
Phenylpropylalcohol, 1 lb bot .....lb.	12.00	12.50	12.50	12.00	16.00	12.00
Skatol, 1 oz bot.....lb.	4.50	7.00	7.00	4.50	7.00	4.50
Terpinyl Acetate, 25 lb cans..lb.	.75	.80	.80	.75	.80	.75
Imported, 25 lb cans.....	.85	.90	.90	.85	.90	.85
TERPINEOL, CP, 1000 lb drs .....lb.	.27	.29	.35	.27	.35	.33
50 lb cans.....lb.	.31	.33	.39	.31	.39	.37
Absolute, 25 lb cans.....lb.	.48	.50	.50	.48	.50	.48
Imported, 25 lb cans...lb.	.58	.60	.60	.58	.60	.58
Vanillin, USP, 25 lb tins....lb.	6.00	7.00	7.00	6.00	7.50	7.00
1 lb cans.....lb.	.....	7.15	7.15	7.15	7.70	7.15

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{ Monthly Review }

Lemon Oil at New Low

Lemon oil continues in supply with prices again reaching new lows for the year. The Italian oil is quoted here at $3.00 and $3.65, a recession of about 35c per lb. during the past month. It is reported that new crop oil can still do better than these figures. The new crop will come in after January. The California oil is quoted spot at $2.25 and $2.45 per lb. a reduction during the past month of approximately 55c per lb. The new crop oil is being offered at about same as spot.

There has been a tendency on the part of some consumers to purchase a part of their requirements at these figures with the expectation of purchasing additional requirements on the way down.

While local stocks of lemon oil have been unusually low during the Summer months, the slack season in essential oils, foreign demand has been lighter than ordinary and stocks have been and are sufficient to supply it until the new production is available according to Consul L. G. Bradford, Rome. Production of machine-extracted lemon oil is undoubtedly increasing but sponge hand-extracted oil is of better quality and invariably commands higher prices. Blending of sponge and machine extracted oil is a common practise of producers.

Orange Oil Goes Lower

Orange oil is also weak in tone with the Italian being quoted here at $3.50 and $3.80, a reduction over last month's high price of approximately 65c per lb. It is the opinion of dealers that better prices than these can be done for new crop next year. As with lemon oil, some consumers have considered it wise to purchase part of their requirements at these figures with the expectation of making further purchases as the market declines.

American orange oil is quoted at $3.85 to $4.10 for the cold pressed. These prices are also shaded for new crop. The American distilledoil is quoted at $2.25 to $2.35, a reduction over last month's high figure of 50c per lb.

A new source of orange oil is reported. Samples have been received here from an American possession and wherever submitted to examination have met with entire satisfaction. Should this new source develop in any quantity, and it appears likely that it will, the situation will be further complicated and any effort to stabilize the price of orange oil will be obviated.

Peppermint Oil after a rather sharp decline several weeks ago, now seems stabilized at $3.55 to $3.65 for the redistilled oil. This would seem an attractive figure although dealers report there is no real movement in this commodity.

Sassafras presents a strong undertone due to its scarcity. There is very little stocks available in the spot market. Price however remains unchanged at $1.30 to $1.32 per lb.

Wormseed, although unchanged in price at $3.55 to $3.65 is reported as presenting a strong undertone.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Valerianic Ether see Ethyl Valerate					
Yara Yara, 1 lb cans lb.	1.50	1.60	1.60	1.50	1.60	1.50

Essential Oils

Almond Bitter, USP, 5 lb bot lb.	2.75	2.85	2.85	2.70	2.80	2.70
Bitter, ffPA, 5 lb bot lb.	2.85	2.95	3.10	2.85	3.25	3.00
Sweet, 56 lb cans lb.	.65	.68	.85	.65	.85	.73
Amber crude, 25 lb tins lb.	.33	.35	.35	.33	.35	.33
Rectified, 25 lb tins lb.	.52	.55	.55	.52	.55	.52
Angelica Root, 1 lb bot lb.	21.00	23.00	24.00	21.00	28.50	16.00
Anise Tech, 400 lb drums lb.	.78	.83	.85	.55	.58	.54
USP, 60 lb cans lb.	.85	.86	.86	.58	.61	.57
Apricot Kernel, 50 lb cans lb.	.40	.42	.46	.40	.50	.44
Bay, 25 lb tins N. F. V., 50.55% Phenol lb.	2.40	2.60	3.00	2.30	3.00	1.90
Terpeneless lb.	5.80	6.00	6.00	5.80	6.00	5.80
BERGAMOT, 25 lb coppers lb.	3.50	3.90	5.35	3.50	6.10	4.85
Terpeneless lb.	14.00	18.00	18.00	14.00	18.00	14.00
Artificial, 25 lb cans lb.	2.50	3.25	3.25	2.50	3.25	2.50
Birch, Sweet, Northern, 25 lb tins lb.	3.75	4.00	4.00	3.75	4.00	3.75
Southern, 25 lb tins lb.	.....	1.95	1.95	1.95	1.95	1.95
Birch Tar, rect., 5 lb bot lb.	.50	.55	.55	.50	.55	.50
Crude, 50 lb tins lb.	.12	.13	.13	.12	.13	.12
Bois de Rose, tins Brazillian lb.	1.55	1.60	1.70	1.55	2.00	1.80
Cayenne, tins lb.	1.90	2.00	2.35	1.90	2.60	2.05
Cade, 25 lb cans lb.	.25	.27	.27	.25	.27	.25
Cajuput, native, 50 lb tins lb.	.75	.80	.88	.70	.75	.70
Calamus, 5 lb bot lb.	3.40	3.50	3.50	3.40	3.50	3.40
Camphor Sassa, 1000 lb drs lb.	.29	.30	.36	.14½	.15½	.14½
White, 400 lb drs lb.	.40	Nom.	.40	.10½	.12½	.10½
Cans, 50 lbs lb.	.35	Nom.	.35	.14	.15	.14
CANANGA, Native 25 lb tins lb.	2.90	3.15	3.25	2.90	3.50	3.00
Rectified, 25 lb tins lb.	3.40	3.50	3.50	3.40	4.00	3.40
Caraway, USP lb.	1.85	1.95	2.00	1.65	1.85	1.65
Cardamon, NF, 1 lb bot lb.	26.00	39.00	39.00	25.00	38.00	25.00
Cascarilla, USP, 1 lb bot lb.	75.00	90.00	90.00	50.00	64.00	50.00
Cassia, 80-85%, 400 lb drs lb.	.....	Nom.	.....	.....	1.45	1.30
Redist, USP, 50 lb cans lb.	1.45	1.50	2.10	1.45	3.25	1.70
Cedar Leaf, 50 lb tins lb.	1.05	1.10	1.10	.95	1.35	.90
Cedar Wood, light, 1000 lb drs lb.	.25	.27	.28	.25	.29	.24
Celery, 1 lb bot lb.	.....	7.75	7.75	7.75	8.50	7.25
Chaulmoogra, USP 80 lb cases lb	.....	1.50	1.50	1.20	1.20	1.20
Cinnamon Ceylon, 1 lb bot lb.	9.50	13.00	13.00	9.50	13.00	9.75
Leaf, 5 lb bot lb.	1.85	1.95	1.95	1.60	1.75	1.60
CITRONELLA Ceylon, 1000 lb drs lb.	.56	.58	.58	.44	.56	.33
50 lb tins lb.	.60	.61	.61	.46	.58	.35
Java, 400 lb drs lb.	.86	.91	.91	.49	.51	.40
50 lb tins lb.	.88	.93	.93	.52	.54	.43
Cloves, USP, 50 lb cans lb.	1.95	2.00	2.70	1.95	2.65	1.25
6 lb bot lb.	2.20	2.25	2.90	2.20	2.75	1.35
Copaiba lb.	.....	.65	.80	.65	.80	.65
Coriander, USP, 10 lb bots lb.	6.25	6.75	11.25	6.25	14.00	10.50
Croton USP, 25 lb tins lb.	2.75	2.80	2.80	.90	.95	.90
Cubebs, USP, 5 lb bot lb.	2.90	3.00	3.00	2.90	3.45	2.90
Cumin, 1 lb bot lb.	.....	3.75	3.75	3.75	3.75	3.75
Dill, 25 lb cans lb.	3.75	3.85	3.85	3.75	4.25	3.75
Erigeron, 20 lb tins lb.	1.80	1.90	1.90	1.80	2.50	1.80
EUCALPYTUS Austl, USP, 56 lb cans, cases lb.	.51	.52	.60	.51	.60	.59
500 lb drs lb.	.50	.51	.59	.50	.59	.58
Fennel, USP, 25 lb tins lb.	.80	.90	.85	.80	.85	.80
Geranium African, 25 lb tins lb.	4.50	4.75	5.40	3.85	4.25	3.00
Bourbon, 28 lb tins lb.	4.50	4.75	5.85	4.25	4.90	3.00
Turkish, 28 lb tins lb.	3.25	3.35	3.35	3.00	3.35	2.45
Ginger, 1 lb bot lb.	6.60	6.85	6.85	6.00	6.75	4.80
Gingergrass, 28 lb tins lb.	2.50	2.70	2.70	2.50	2.70	2.50
Hemlock, 25 lb tins lb.	1.05	1.10	1.10	1.05	1.10	1.00
Juniper Berries, USP, 25 lb tins lb.	2.05	2.10	2.15	2.05	3.75	2.10
Wood, 50 lb tins lb.	.50	.60	.60	.50	.60	.50
LAVENDER, USP, 28 lb tins lb	3.25	3.40	3.40	3.25	3.85	3.00
Spike Spanish, 50 lb cans lb.	.90	.95	.95	.90	1.05	.90
Lemon Ital, 25 lb cans lb.	3.00	3.65	5.75	3.00	4.85	2.30
California 35 lb cbys lb.	2.25	2.45	4.65	2.25	4.35	1.85
Lemongrass, native, 50 lb cans lb.	.72	.74	.83	.81	.95	.81
Limes, expressed, 25 lb tins lb.	20.00	23.00	28.00	20.00	25.00	9.25
Distilled, 25 lb tins lb.	8.75	9.00	9.75	7.75	8.50	6.00
Linaloe Mex., 70 lb cases lb.	2.20	2.25	2.25	2.20	2.45	1.90
Mace, distilled, 50 lb tins lb	1.75	1.80	1.80	1.75	1.85	1.60
Mandarin, 25 lb cases lb.	9.00	9.50	11.50	9.00	11.50	7.50
Mirbane, ref Aromatic Chemicals						
MUSTARD, USP, 1 lb bots lb.	9.50	10.00	10.00	9.50	10.00	9.50
Artif, USP, 5 lb bot lb.	1.60	1.70	1.70	1.60	2.00	1.60
Neroli Bigarade, ⅛ & ¼ & 1 lb bot lb.	150.00	325.00	325.00	75.00	140.00	75.00
Petale, 1 lb bot lb.	160.00	170.00	170.00	160.00	170.00	160.00
Artificial, 1 lb bot lb.	5.00	15.00	15.00	5.00	15.00	5.00
Nutmeg, USP, 50 lb tins lb	1.75	1.80	1.80	1.75	1.80	1.60
ORANGE BITTER, 25 lb tins lb	3.50	3.75	6.75	3.50	8.75	2.70
Sweet W Ind, 25 lb tins lb	3.25	3.50	6.50	3.25	8.75	2.60
Italian, 25 lb cop lb.	3.50	3.80	7.35	3.50	9.00	2.80

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Essential Oils

{ Monthly Review }

Musk from Tibet

The bulk of the musk exported from China comes from Tibet, the home of the musk deer. It is bought by musk dealers at Ta-tsien-lu and sent to Chungking where it is packed in tin-lined wooden boxes containing from 1 to 10 catties (1¼ to 13⅓ pounds) and shipped to Shanghai, which is the principal musk center and export port for this product. Very little musk is actually sold in Chungking since the Ta-tsien-lu musk dealers forward it to Shanghai for sale.

About 2,000 catties (2,667 pounds) are brought to Chungking from Ta-tsien-lu annually. France is the principal purchaser, although considerable quantities also go to Hongkong, Great Britain, Germany, Japan, and the United States. According to the Chinese maritime customs statistics, exports of musk from China during recent years were: 1925—2,621 pounds, value $678,683; 1926—2,328 pounds, value $538,319; 1927—2,405 pounds, value $544,559. Of these exports the following quantities were sent to the United States; 1925—211 pounds, value $55,276; 1926—197 pounds, value $45,729; 1927—145 pounds, value $33,507.

Prices of musk in October, 1929, were understood to be about $93 per catty at Ta-tsien-lu and from $148 to $169 per catty at Shanghai. The difference between the Ta-tsien-lu and Shanghai prices is due largely to the numerous and excessive inland taxes.

The export duty on musk at present is about $0.43 per pound. In addition, there is an export surtax equal to one-half of the export duty, as well as a local surtax at Chungking of a similar amount.

American firms interested in information relative to Chinese raw materials should consult "China, A Commercial and Industrial Handbook," Published by the Department of Commerce in 1926, which can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for $1.75 per copy, or from the district offices of the Bureau. (Consul General F. P. Lockhart, Hankow.)

A list of musk dealers in Chungking is available to interested American firms upon application to the Chemical Division.

Citronella Strong

Citronella oil remains unchanged in price but the market is decidedly firm. Ceylon for shipment is considerably higher than spot market and there is undoubtedly an acute shortage of this commodity. The shortage is attributed to the fact that the grass of species andropogon from which the oil is obtained is considerably dried up and little oil is being obtained from it.

There is no oil available from the last crop and due to the great shortage dealers are compelled to hold what orders they have on hand with the expectation of delivering from the crop to come. No oil is being offered abroad at this time and London, from which oil can usually be obtained if anywhere, has absolutely refused to quote. How high the oil will go, and how acute the situation may become remains for the future alone to decide.

	Current Market		1929 High	1929 Low	1928 High	1928 Low
Orange American, Cold pressed 25 lb tins ..... lb.	3.85	4.10	7.40	3.85	8.75	3.50
Distilled, 25 lb tins..... lb.	2.25	2.35	5.25	2.25	7.75	2.20
Spanish, 25 lb tins..... lb.	3.85	4.00	7.15	3.85	8.75	3.00
Oil Orris, concrete..... oz.	6.00	6.25	6.25	2.50	4.90	2.50
Origanum, 50 lb cans tech... lb.	.28	.30	.30	.28	.30	.28
Parsley, 1 lb bot..... lb.	9.00	9.25	9.25	8.00	8.25	6.50
Patchouli, 5 lb bot..... lb.	8.25	8.50	8.75	6.75	13.00	7.25
Pennyroyal, dom, 25 lb tins.. lb.	1.55	2.10	2.10	1.55	1.90	1.55
Imported, 25 lb tins..... lb.	.....	1.20	1.20	1.20	1.55	1.20
Pepper Black lb.....	10.25	.....	.....	.....	.....	.....
Peppermint, nat. 60 lb cases lb.	3.35	3.45	4.05	2.85	3.55	3.10
Redis, USP, 60 lb cs..... lb.	3.55	3.65	4.30	3.10	3.65	3.40
Petit Grain S A., 25 lb tins.. lb.	1.95	2.05	2.05	1.90	2.10	1.50
French, 1 lb bot..... lb.	6.25	6.50	6.50	6.25	6.50	6.25
Italian, 25 lb tins..... lb.	2.20	2.30	2.30	2.20	2.30	2.20
Pimento, 25 lb tins..... lb.	2.50	2.75	2.75	2.25	3.25	2.55
Pineedle Siberian, cans..... lb.	.65	.70	.70	.60	.85	.65
Pinus, Sylvestris, 25 lb tins.. lb.	1.90	2.00	2.00	1.90	2.00	1.90
Pumilio, USP, 25 lb tins.. lb.	2.85	2.95	2.95	2.85	2.95	2.85
Rose Fr, 8, 16, & 32 oz pkgs.. lb.	14.00	17.00	17.00	12.00	15.00	12.00
Bulg, 8, 10 & 32 oz pkgs... lb.	14.00	14.50	14.50	11.50	13.00	10.25
Rosemary, USP, 27½ lb tins.. lb.	.....	.56	.56	.47½	.56	.47½
1000 lb drums..... lb.	.....	.50	.50	.42½	.45	.42½
Tech, 25½ lb tins..... lb.	.....	.40	.40	.40	.34	.34
Rue, 1 lb bot..... lb	3.15	3.25	3.25	3.15	3.25	3.15
SANDALWOOD, E Ind, USP, 100 lb case..... lb.	9.35	9.85	9.85	7.45	7.50	7.05
W Indian (Amayris), 25 lb tins..... lb.	2.85	2.95	2.95	2.25	2.65	2.30
Sassafras, USP, 50 lb cans... lb.	1.30	1.32	1.32	.78	.85	.75
Artificial, 1000 lb drs, 60 lb cans..... lb.	.35	.37	.40	.26	.28	.26
Safrol, cans..... lb	.41	.43	.48	.28	.29	.28
Savin, 50 lb tins..... lb	2.60	2.75	2.75	1.65	1.90	1.70
SPEARMINT, USP, 50 lb tins ..... lb	4.65	4.70	4.70	4.05	4.55	4.10
Spruce, 50 lb tins..... lb	1.05	1.10	1.10	1.05	1.10	1.00
Tansy, American, 25 lb tins.. lb.	3.75	4.00	4.00	3.75	4.50	3.75
Tar, 50 gal bbls..... lb.	.25	.30	.30	.25	.30	.25
USP, 50 gal bbls..... lb.	.75	1.50	1.50	.75	1.50	.75
Thyme, red, NF, 25 lb tins.. lb.	.78	.80	.90	.78	.90	.80
White, NF, 25 lb tins..... lb.	.83	.85	.90	.83	.90	.85
Tech, 110 lb drums..... lb.	.60	.70	.70	.60	.70	.60
Turpentine, USP, rect cbys.. lb.	.27	.30	.30	.27	.30	.27
Vetivert Bourbon, 10 bot.... lb.	6.25	6.50	6.50	6.25	6.75	5.85
Indian, 1 lb bot..... lb.	25.00	38.00	38.00	25.00	38.00	25.00
Java, 1 lb bot..... lb.	15.00	16.00	16.00	15.00	16.00	15.00
Wine, heavy, 1 lb bot..... lb.	1.65	1.75	1.75	1.65	1.75	1.65
WINTERGREEN Gaultheria, true, 25 lb tin..... lb.	8.00	10.00	10.00	8.00	10.00	8.00
Southern, 25 lb tins.... lb.	3.75	4.00	4.00	3.75	4.00	3.75
Synthetic see Methyl salicylate.....						
Wormwood, dom, 25 lb tins.. lb.	17.00	21.00	35.00	17.00	35.00	14.00
Wormseed, Balt, 25 lb tins... lb.	3.55	3.65	3.65	1.80	3.45	1.90
Ylang Ylang Bourbon, 10 lb tins No. 1..... lb.	9.00	9.25	9.75	9.25	10.50	8.50
10 lb tins No. 2..... lb.	8.25	8.50	8.50	8.25	8.50	6.75
Manila, 1 lb bot..... lb.	30.00	40.00	40.00	30.00	32.00	30.00

Oleoresins

Aspidum, USP, bot and tins.. lb.	.....	1.25	1.45	1.25	2.10	1.50
Capsicum, USP, bot and tins.lb.	3.50	4.25	4.25	3.50	4.25	3.50
Cubeb, USP, bot and tins.... lb.	3.00	3.25	3.25	3.00	3.25	3.00
Ginger bot and tins..... lb.	2.85	3.35	3.35	2.85	3.35	2.25
Malefern see Aspidum.....						
Orris, bot & tins..... lb.	15.00	18.00	18.00	15.00	18.00	15.00
Pepper, black, USP, bot & tin ..... lb.	.....	9.50	9.50	9.50	.....	.....
Vanilla, bot & tins..... lb.	8.00	8.75	8.75	8.00	8.75	8.00

Perfumer's Sundries

Almond Meal, 25 lb cans.... lb.	.20	.21	.21	.20	.21	.20
Amber liquid, 400 lb drs..... lb.	2.20	2.30	2.30	2.20	2.30	2.20
Ambergris, Black, boxes..... oz.	14.00	15.00	15.00	14.00	15.00	14.00
Gray boxes..... oz.	32.00	36.00	36.00	32.00	36.00	32.00
BALSAM COPAIBA Para, 80 lb cases..... lb.	.....	.33½	.34	.30	.49	.32
South American, USP, 80 lb cases..... lb.	.....	.37	.37	.3	.52	.35
Peru, 120 lb cases..... lb.	2.00	2.00	2.05	1.75	1.80	1.65
Tolu, 90 lb cases..... lb.	1.25	1.30	1.30	1.15	1.20	.95
Benzoin Gum, Siam, boxes... lb.	1.20	1.30	1.30	1.20	1.30	1.20
Castoreum, 1 lb bot..... lb.	9.50	10.00	10.00	9.50	10.00	9.50
Chalk, Precip, 1 gt 175 bbls. lb.	.04½	.05	.05	.04½	.05	.04½
Cherry Laurel Water, 24 ltr cby ..... lb.	4.10	4.60	4.60	4.10	5.60	4.10
Civet, Abyssin, horns..... oz.	2.10	3.00	3.00	2.10	3.00	2.10
Labdanum, 5 lb bot..... lb.	5.50	6.00	6.00	5.50	6.00	5.50
Musk Pods Cabardine, tins.. lb.	.....	.....	.....	.....	.....	.....
Musk Tonquin, tins, Pods.... oz.	24.00	26.00	26.00	24.00	26.00	24.00
Grains Cabardine, tins.... oz.	.....	.....	.....	.....	.....	.....
Tonquin, tins, Grained.. oz.	28.00	34.00	34.00	28.00	34.00	28.00
Synthetic See Aromatic Chemical.....						
Rice Starch, 140 lb bags.... lb.	.09	.10	.10	.09	.10	.09
Rose Water, 24 ltr cbys.. cby.	5.00	5.50	5.50	5.00	5.50	5.00
Sandalwood, pwd bags..... lb.	.22½	.40	.40	.22½	.40	.22½
Saponin, 5 lb tins..... lb.	1.15	1.30	1.30	1.15	1.30	1.15
Talc, Italian, 220 lb bags... ton.	60.00	80.00	80.00	60.00	80.00	60.00
French, 220 lb bags.....ton.	40.00	45.00	45.00	40.00	45.00	40.00

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Monthly Review

Camphor Imports Up Sharply

A perusal of the accompanying table will reveal many interesting changes in the 1929 (9 months) imports of gums, resins, and balsams. The three camphors have an increased value of over $1,100,000. Balsams show a decrease of approximately 26,000 pounds but are valued at $18,000 more. Gum arabic has decreased by approximately 100,000 pounds but imports values have increased approximately 30 per cent., or over $200,000. There is an increase of approximately 100,000 pounds of gum tragacanth, with a decrease of $50,000 in value. The quantity and value are shown in the following table:

	9 Months, 1928 Pounds	Value
Camphor		
Natural, crude	2,992,663	$1,118,042
" refined	809,499	404,940
Synthetic	1,173,745	424,702
Balsams, crude	323,462	151,162
Gum arabic	8,387,213	663,447
Tragacanth	1,420,717	705,882
Other gums and resins, n. e. s.		979,330

	9 Months, 1929 Pounds	Value
Camphor		
Natural, crude	3,704,068	$1,383,222
" refined	1,209,155	664,970
Synthetic	2,899,624	1,007,454
Balsams, crude	297,082	169,038
Gum arabic	8,276,499	867,531
Tragacanth	1,517,898	656,560
Other gums and resins, ne. e. s.		661,203

Imports of some other products for the first nine months of 1928 contrasted with the same period for 1929 are shown in the following table:

	9 Months, 1928 Pounds	Value
Cinchona bark	1,227,674	$327,495
Pyrethrum flowers	10,414,406	2,686,390
Licorice root	38,589,000	1,331,021
Licorice extract	904,953	176,369
Senna	1,875,990	120,322
All other	18,650,295	2,781,242

	9 Months, 1929 Pounds	Value
Cinchona bark	1,396,806	$378,936
Pyrethrum flowers	4,864,398	1,275,090
Licorice root	54,502,611	1,423,250
Licorice extract	845,110	145,691
Senna	1,108,071	79,747
All other	20,744,032	3,089,024

The quantity of licorice root and licorice extract remaining in bonded warehouse on August 31, 1929, was 63,420,462 and 198,667 pounds, respectively.

During 1927 and 1928 essential oil exports from France to the United States through the port of Nice amounted to 136,196 pounds, valued at $1,109,580, and 224,389 pounds, valued at $906,227, respectively, states Consul George Alexander Armstrong, Nice. These figures show an increase in weight of 88,193 pounds and a decrease in value of $203,303.

Peppermint leaves, imported, have advanced considerably in price from 65c to 75c per lb. Practically no leaves have been imported and as shipment price hat greatly increased what stocks remain in the spot markes are being disposed of at very advantageous prices. Domestic leaves remain unchanged in price at 45c to 46c per lb. as to quantity.

Drugs and Spices

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Aconite Root, USP, bags....lb.	.18	.19	.21	.18	.27	.19
Agar Agar, domestic, No. 1, 200 lb.....lb.	1.40	1.45	1.45	1.40	1.40	.96
Almonds Meal.....lb.	.19	.20	.30	.15	.30	.15
Aletris Root, bags.....lb.	.36	.37	.38	.35	.42	.36
Alkanet Root, bags.....lb	.13	.14	.15	.11	.12	.10
ALOES, Cape, 400 lb cases. lb.	.14	.15	.18	.14	.18	.09½
Curacao, 100 lb cases.....lb.	.25	.27	.27	.19	.20	.12
Socotrine, Whole, 300 lb cs lb.	.35	.40	.50	.35	.45	.35
Althea Root, bags.....lb.	.20	.22	.22	.20	.22	.20
Cut cases.....lb.	.32	.39	.40	.32	.40	.33
Angelica Root, bags.....lb.	.21	.22	.28	.21	.25	.18
Angostura Bark, bags.....lb.	.22	.25	.26	.19	.18	.18
Anise Star case.....lb.	.13	.13½	.19	.11	.26½	.14
Spanish, bags.....lb.	.14	.14½	.19	.13½	.20	.13
ARABIC GUM, White, No. 1, 220 lb bags.....lb.	.35	.36	.38	.22	.27½	.22
Seconds, 220 lb bags.....lb.	.33	.34	.36	.16	.21	.16
Sorts, Amber, 220 lb bags..lb.	.24	.26	.32	.11	.11½	.10½
Powd, USP, 300 lb bbls....lb.	.30	.32	.35	.17½	.21	.17½
Areca Nuts, 100 lb bbls.....lb.	.12	.14	.14	.10	.12½	.10
Powd, 100 lb bbls.....lb.	.17	.19	.22	.14	.21	.15
Arnica Flowers, bales.....lb.	.43	.44	1.00	.43	1.50	.95
Root, bags.....lb.	.45	.46	.46	.35	.45	.35
Arrowroot, St. Vincent, powd bbls.....lb.	.10	.10½	.10½	.10	.10½	.10
Asafoetida, 250 lb cases.....lb.	.24	.27	.29	.23	.31	.25
Powd, 50 lb boxes.....lb.	.49	.50	.54	.46	.68	.50
Balm Gilead Buds, bags.....lb.	.35	.40	.40	.35	.40	.31
Balmony Herbs, bales.....lb.	.23	.25	.25	.18	.23	.18
Barberry Bark, of root, bags lb.	.18	.20	.20	.18	.32	.19
Bayberry Bark, bales.....lb.	.10	.11	.13	.10	.18	.12
Wax bbls.....lb.	.29	.32	.32	.29	.32	.29
BELLADONNA LEAVES, bales .....lb.	.18	.20	.20	.17	.23	.17
Root, bags.....lb.	.18	.19	.21	.18	.21	.19
Bees Wax, White, cases.....lb.	.55	.60	.60	.55	.60	.55
Yellow refined cases.....lb.	.41	.42	.42	.41	.42	.41
Berberis Aquafolium Root, bags .....lb.	.09	.10	.12	.09	.13	.10
Beth Root, bags.....lb.	.16	.17	.18	.16	.20	.17
Black Indian Hemp Root, 100 lb bags.....lb.	.18	.19	.19	.18	.20	.18
Blood Root, bags.....lb.	.18	.18½	.18½	.17½	.35	.21
Blueflag Root, bags.....lb.	.18	.21	.21	.18	.27	.17
Boldo Leaves, bales.....lb.	.15	.17	.17	.15	.17	.15
Boneset Herb, bales.....lb.	.11	.12	.12	.10	.10	.07½
Borage Flowers, bales.....lb.	.15	.16	.15	.14½	.17	.14½
Broomtop Herb Cut, bales..lb.	.10	.11	.11	.10	.11	.10
Bryonia Root, bags.....lb.	.11	.12	.12	.11	.12	.10½
BUCHU LEAVES Short, 250 lb. bales.....lb.	.46	.47	.47	.36	.55	.42
Long bales.....lb.	.75	.80	.80	.75	.80	.75
Buckbean Leaves, bales.....lb.	.08	.09	.10	.08	.15	.13
Buckthorn Bark, bags.....lb.	.05	.05½	.05½	.05	.05½	.05
Berries, bags.....lb.	.40	.45	.50	.40	.50	.45
Burdock Root, bags.....lb.	.17	.18	.18	.13	.17	.11
Seed bags.....lb.	.40	.....	.65	.40	...	.65
Burgundy Pitch, 110 stand gross for net.....lb.	.08	.09	.09	.08	.09	.08
Imported.....lb.	.11	.12	.13	.11	.13	.12
Calabar Beans, bags.....lb.	.25	.26	.26	.22	.27	.22
Calamus Root, blchd cases..lb.	.45	.50	.52	.45	.50	.35
Unbleached, bags.....lb.	.06½	.07	.07	.06½	.07	.06½
Calendula Petals, imp bales..lb.	.95	1.05	1.70	.95	1.75	.85
Calisaya Bark, bales.....lb.	.21	.22	.22	.21	.23	.20
Powdered, bbls.....lb.	.26	.27	.27	.26	.32	.18
Canary Seed, South America, bags.....lb.	.07	.07½	.07½	.05	.05½	.04½
Dutch, bags.....lb.	.05½	.06½	.06½	.05½	.06½	.05½
Candelilla Wax, bags.....lb.	.27	.28	.28	.27	.28	.27
Cannella Alba Bark, bales...lb.	.30	.31	.31	.28	.32	.28
Cannabis, U.S.P.....lb	.23	.30	.33	.22	.....	.....
Cantharides, Chinese, cases..lb.	.42	.47	.55	.42	.72	.50
Powdered, boxes.....lb.	.63	.65	.80	.63	.88	.75
Russian, cases.....lb.	.50	.51	.55	.50	.70	.54
Powdered, boxes.....lb.	.62	.64	.75	.65	.80	.68
Caraway Seed, African, bags .....lb.	.05	.06	.06	.05	.12	.05
Dutch, 11 lb bags.....lb.	.10	.10½	.12	.09½	.12	.09½
Cardamon bleached, cases...lb.	1.45	1.55	1.75	1.45	2.00	1.50
Decorticated, cases.....lb.	1.36	1.42	1.60	1.36	1.60	1.25
Cascara Amarga, 150 lb bbls. lb.	Nom.	.....	.....	.....	.90	.90
So called bales.....lb.	.60	.85	.85	.60	.85	.60
CASCARA SAGRADA, 1926 bark.....lb.	.17	.18	.18	.15	.16	.15
1927 bark.....lb.	.15	.16	.16	.14	.15	.14
1928 bark .....lb.	.14	.15	.15	.13	.14	.13
Cascarilla Bark, quills, bales. lb.	.90	1.00	1.00	.90	1.00	.90
Siftings, bbls.....lb.	.65	.....	.65	.65	.65	.65
Cassia Batavia No. 1 bbls....lb.	.13½	.14	.15	.13½	.16	.13½
Shortstick, bales.....lb.	.10½	.11	.12½	.10½	.13	.11
Batavia No. 3, bales.....lb.	.09½	.09½	.11	.09½	.11	.09½
China Select Rolls, cases..lb.	.07½	.07½	.09	.08½	.13½	.09
Broken, bales.....lb.	.09½	.10	.10	.09½	.10	.08½
Saigon, thin.....lb.	.30	.31	.39	.28	.39	.22
Buds, cases.....lb.	.25	.26	.28½	.16½	.19	.18½
Fistula, baskets.....lb.	.11	.12	.13	.10	.24	.11
Catnip, Herb, bales.....lb.	.19	.20	.23	.18	.23	.19
Celery Seed, bales.....lb.	.17½	.18	.19	.16½	.21	.19
Ceresin Wax, White, bags...lb.	.15	.20	.20	.15	.20	.15
Yellow 200 lb. bags.....lb.	.11	.14	.14	.11	.14	.11
Imp. 100 lb. bags.....lb.	.25	.38	.38	.25	.38	.25

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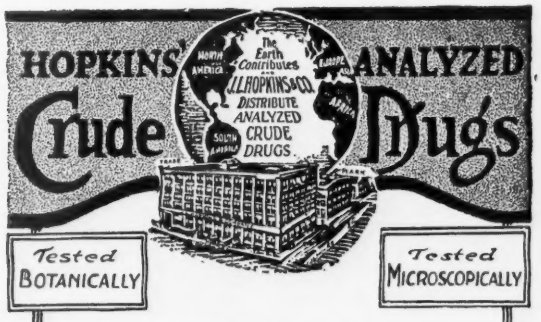

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Monthly Review

A Warning to Senna Buyers

A very large consignment of 1,050 bales of Tinnevelly senna leaves arrived in England recently and was offered last week by tender under salvage sale conditions. These goods were shipped from Tuticorin per "Kasama" and originally destined for the United States, but owing to a serious outbreak of fire on board, the senna cargo got badly damaged and was transhipped to Liverpool. The examination of this consignment shows a considerable portion to be smoke and water damaged and is unfit for sale for human medicinal use in its present condition. Buyers should not be misled by colour and cleanness of the leaves when purchasing future supplies of Tinnevelly senna, as part of the damaged consignment has retained its freshness in appearance, but has a strong "india rubber like" odour which suggests that this commodity formed part of the cargo. It is possible that this part of the consignment may find its way on to the market, and buyers are advised to examine closely and smell all samples submitted to them; it would also be advisable to obtain a guarantee from suppliers that goods are of direct importation and in sound condition. Buyers may possibly come to the conclusion that with such a large parcel floating about prices may weaken, but it must be remembered that the United States is bound to require the shipment duplicated, and there is some doubt about India being able to meet the demand for a further 1,000 bales or so at this period. It would probably not be until next crop (May-July) that such an order could be executed.—"Chemist & Druggist."

Ginseng Exports Increase

While approximately 900,000 pounds less of crude drugs have been exported this year, the value of shipments declared has increased approximately $357.00.

	9 Months, 1928 Pounds	Value
Ginseng	144,091	$1,634,722
Other crude vegetable drugs	4 119,000	147,297
	9 Months, 1929 Pounds	**Value**
Ginseng	167,989	$2,038,406
Other crude vegetable drugs	3,179,401	694,331

Quince Seed Higher

Quince seed, Spanish, is very much higher in price at 80c to 90c per lb. There is an extreme scarcity of this commodity, with very little on spot and no offerings being made abroad. It is reported that the new crop has been entirely sold up although very little information regarding the new crop is available here. Should it prove true that the crop has fallen into a few strong hands who do not have to dispose of it quickly the price may go even higher. No relief could then be expected before next crop.

Chamomile flowers, Roman, are very high for replacement. What has been produced abroad is needed for home consumption so that the export market has suffered. Spot price ranged from 65c to 70c per lb. Hungarian flowers, while strong in tone, remain unchanged at 21c to 22c per lb.

	Current Market		1929 High	1929 Low	1928 High	1928 Low
CHAMOMILE FLOWERS						
Roman, bales lb.	.65	.70	.70	.40	.50	.18
Hungarian, cases lb.	.21	.22	.26	.20	.24	.15
Charcoal Willow, powd, bbls lb.	.06	.06½	.06½	.06	.06½	.06
Wood, powd, bbls lb.	.04	.05	.05	.04	.05	.04
Chestnut Bark lb.	.07	.08	.08	.07	.....	.....
Leaves bales lb.	.05	.05½	.05½	.05	.06½	.05
Chicle Gum, lb bbls lb.	.58	.75	.75	.58	.75	.58
Chiretta, bales lb.	.26	.28	.30	.26	.30	.25
Cinnamon, Ceylon, No. 1, bales lb.	.34	.35	.62	.34	.62	.60
No. 2 bales lb.	.33	.34	.51	.32	.61	.55
No. 3 bales lb.	.55½	.56	.56	.55½	.56	.55½
Clover Tops, Red, bags lb.	.10	.11	.14	.10	.12	.10
Cloves Zanzibar, 135 lb bbl lb.	.27½	.27½	.38	.27½	.38	.18
Cochineal, Black lb.	.69	.....	.69	.69	.69	.69
Silver lb.	.85	.....	.85	.85	.85	.85
Cohosh Root, Black, bags lb.	.08	.09	.09	.07½	.09	.07
Blue, bags lb.	.10	.11	.12	.10	.12	.09
Colchicum Root, bags lb.	.10	.11	.11	.07	.07	.06
Seed, bags lb.	.95	1.00	1.00	.65	.70	.25
COLUMBO ROOT, bags lb.	.15	.16	.20	.15	.20	.05
Colocynth Pulp, bales lb.	.26	.27	.45	.29	.110	.42
Coltsfoot Leaves, bags lb.	.08	.09	.09	.08	.12	.08
Comfrey Root, bags lb.	.11	.....	.14	.11	.14	.14
Condurango Bark, bags lb.	.15	.16	.17	.15	.16	.13
Coriander Seed, Morocco, bags lb.	.03	.03½	.06	.03	.13	.05
Bleached, bags lb.	.07½	.08	.11½	.07½	.19	.11
Corn Silk, bales lb.	.05½	.06½	.06½	.05½	.06½	.05
Cotton Root Bark, bales lb.	.14	.15	.15	.12	.15	.12
Cowhage, 1 oz tins lb.	1.00	.....	1.00	1.00	1.00	.95
Cramp Bark so called bales lb.	.06½	.07	.08	.06	.08	.05½
True, bags lb.	.35	.40	.48	.35	.55	.34
Cranesbill Root, bags lb.	.10	.....	.10	.10	.12	.10
CUBEB BERRIES, XX bags lb.	.48	.53	.53	.48	.53	.48
Powdered, boxes lb	.50	.55	.55	.50	.55	.50
Culvers Root, bags lb.	.18	.19	.20	.18	.22	.18
Cumin Seed, Malta, bags lb.	.13½	.13¾	.13¾	.12	.15	.12
Morocco, bags lb.	.15½	.16	.16	.12	.15	.12
Cuttlefish, Bone Trieste, Straps lb.	.25	.25	.25	.14	.14	.13
French, boxes lb.	.22	.23	.23	.12½	.15	.12½
Powdered, bbls lb.	.09	.10	.10	.09	.10	.09
Broken, bales lb.	.07	.....	.07	.05	.05	.05
Damiana Leaves, bales lb.	.17	.18	.18	.16	.30	.16
Dandelion Root, Imp. bags lb.	.25	.27	.29	.19	.20	.14
Deer Tongue Leaves, bales lb.	.11	.13	.13	.11	.18	.10
Digitalis Leaves, bales lb.	.28	.30	.70	.28	.70	.30
Dogwood Bark, Jamaica bags lb.	.09	.10	.11	.09	.10½	.09
American bales lb.	.06½	.....	.06½	.06½	.06½	.06½
Doggrass Root, USP, cut bags lb.	.12	.13	.13	.10	.13	.10½
Dragons Blood Mass, cases lb.	.65	.70	.70	.65	.70	.65
Reeds, boxes lb.	3.65	3.75	3.75	.90	.95	.95
Echinacea Root, bags lb.	.24	.26	.28	.24	.33	.26
Elcampane Root, bags lb.	.08	.09	.09	.08	.09	.08
Elder Flowers, bags lb.	.50	.55	.55	.22	.25	.19
Elemi Gum, 85 lb cases lb.	.26	.28	.28	.26	.28	.20
Elm Bark, bundles lb.	.39	.40	.40	.25	.27	.22
Grinding bags lb.	.13½	.14	.14	.13½	.14	.13½
Powdered, bbls lb.	.19	.22	.22	.19	.22	.19
Ephedra Vulgaris, bales lb.	.12	.13	.16	.12	.25	.15
ERGOT, 150-200 lb bags lb.	.60	.65	.95	.60	2.50	.80
Eucalyptus Leaves, bales lb.	.08	.09	.11	.07	.10	.06½
Euphorbia Pilulifera, Herb, bags lb	.08	.09	.11	.09	.10	.07½
Euphorbium Gum, cases lb.	.14	.20	.20	.14	.20	.14
Fennel Seed, French, bags lb.	.15½	.16½	.18½	.15½	.25	.16½
German bags lb.	.17	.19	.27	.17	.32	.20
Foenugreek Seed, 200 lb bags lb.	.06	.06½	.06½	.05	.06	.04½
Fish Berries, 100-125 lb bag lb.	.06	.07½	.07½	.06	.07½	.06
Flax Seed, Whole 182 lb bbls.	16.25	17.00	17.00	14.00	14.75	14.00
Ground, 180 lb bbls lb.	.09	.09½	.09½	.08	.08½	.08
Flea Seeds Black bags lb.	.32	.35	.35	.20	.27	.16
Fringe Tree Bark or Root bags lb.	.19	.21	.24	.19	.27	.22½
Fumigating Pastiles, boxes lb.	.30	.35	.35	.30	.35	.30
Galangal Root, bags lb.	.14	.15	.15	.14	.15	.11
Galbanum Gum, cans lb.	.95	1.05	1.25	.95	1.25	1.00
Gamboge Gum, 100 lb cases lb.	1.10	1.15	1.25	1.10	1.35	1.10
Powdered, cases lb.	.....	1.25	1.40	1.20	1.50	1.20
Gelsemium Root, bags lb.	.09	.10	.12	.09	.13	.09
GENTIAN ROOT, bags lb.	.09	.10	.11	.09	.11	.09
Ground bbls, boxes lb.	.13	.14	.14	.13	.14	.11
Powdered, bbls, boxes lb.	.13	.14	.14	.13	.14	.12½
Ginger, African, bags lb.	.17½	.17½	.17½	.13	.14½	.10½
Jamaica Grinding bags lb.	19½	.20	.20	.18	.23	.17
Cochin ABC & Lemon, bags lb.	.18	.18½	.18½	.17	.20	.16
Ginseng Root, cultivated cs lb.	8.00	10.00	10.00	8.00	10.00	8.00
Wild Southern, cases lb.	.....	16.00	16.00	16.00	16.00	8.50
Golden Seal Root, bags lb.	2.70	2.80	3.80	2.70	4.50	3.90
Powdered, boxes lb.	.....	3.25	4.35	3.25	5.25	4.60
Herb, barrels lb.	1.25	1.30	1.30	1.25	1.30	1.25
Grains of Paradise, bags lb.	.30	.40	.85	.30	.60	.40
Grindelia Robusta, Herb, bale lb.	.11	.12	.12	.09	.12	.08½
Guaiac Gum, 150 lb cases lb.	.34	.35	.38	.33	.40	.33
Strained 75 lb cases lb.	.70	.75	.75	.70	.75	.70
Guarana, tin cases lb.	2.75	3.00	3.00	2.50	2.75	1.65
Hellebore Root, Black, bbls lb.	.05½	.06	.06	.05½	.06	.05½
White, 250 lb bbls lb.	.07½	.08½	.08½	.07½	.08½	.07½
Powdered lb.	.11	.12	.12	.11	.14	.11
Helonias Root, bags lb.	.63	.65	.72	.62	.80	.67
Hemp Seed, bags lb.	.05	.06	.06	.05	.07	.03½
Henbane Leaves, USP, bales lb.	.18	.19	.20	.18	.23	.18

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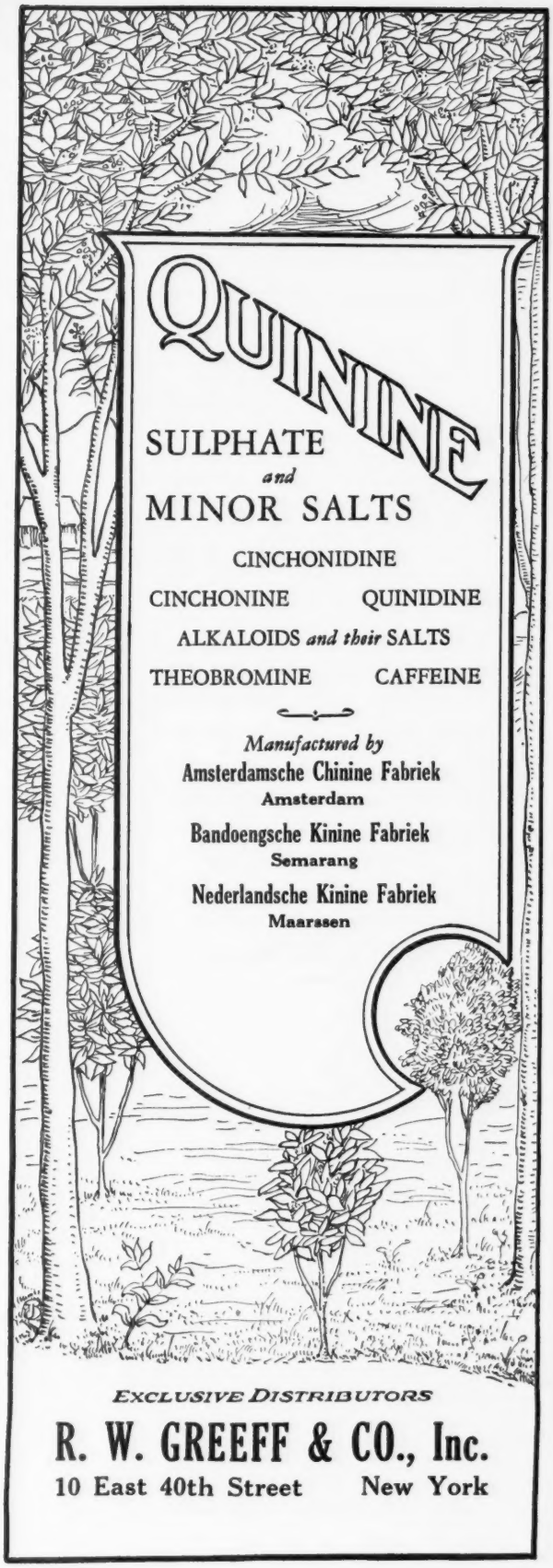

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{ Monthly Review }

Tragacanth Market Indefinite

The quietness prevailing on the Constantinople gum tragacanth market was maintained during September. In view of the importance of existing stocks, which are said to total 840 sacks, arrivals of the new production are relatively limited as compared to those during the same period of previous years. On the other hand, it is said that certain exporters anticipating an abundant crop have sold at low quotations. At present, however, they encounter difficulties to live up to their engagements owing to the fact that quantities as well as prices and qualities do not correspond to those originally provided for. It is estimated that local dealers need a reserve of at least 1,500 sacs of different grades of the new crop, while actually available stocks as stated above do not exceed 840 sacks of inferior grades. As a result, export activities, which usually show a great animation at this period of the year, declined somewhat and amounted to only 134 sacks. Another reason for this decrease in local exports during September is said to be found in the fact that the United States importers have received offers of old Turkish goods from European consignments in Hamburg, London, Marseille, etc., at prices which are considerably lower than those quoted by the Turkish market.

The local market tendency is very indefinite at the present time. The prices for classified gums that prevailed at the end of September were as follows:

Quality	*Piasters per Oke*
Fiori	400
White I	330-340
" II	270-290
Biondo I	180-200
" II	150-170
Yellow I	125-130
" II	110-120
Djalo	80-100
Scarto	47
Traganthos	45

(1 oke—28,264 pounds. The average rate of exchange of the Turkish pound—100 piasters—for the month of September was $0 4770). (Commercial Attache Julian E. Gillespie, Constantinople).

Ipecac Appears Easy

Ipecac root is expected to be in much more plentiful supply when goods on the way from primary markets arrive. While the root has been scarce on spot and in the primary markets for some time past, the new crop material is now coming through and marked relief from the high prices quoted by holders of material is anticipated.

While normally a prolonged period of scarcity and high prices would not immediately be relieved by the arrivals of a few lots, the fact that this material will not find its way immediately into consumers' hands changes the situation somewhat. The fact of the matter is that the manufacturers took on heavy supplies during the Summer months to replace the material sold by them during the influenza epidemic last Winter. It is this replacement on the part of manufacturers is not only responsible the lack of carry-over from the last crop and consequently for the high prices that have been reached, but is also responsible for the fact that manufacturers are not eagerly awaiting the arrival of supplies. All the large consumers have enough material on hand to last them well into the Winter. It is possible that some of the smaller manufacturers might be without supplies, but the tone of the market for the future appears to be on the easy side.

	Current Market		1929 High	1929 Low	1928 High	1928 Low
HENNA LEAVES, bales	lb.	.12	.13	.13	.12½	.13	.12½
Powdered	lb.	.15	.16	.17	.15	.17	.16
Hops, bales	lb.	.....	.23	.32	.23	.32	.25½
Horehound, Herb, bales	lb.	.08	.09	.09	.08	.09	.07
Hydrangea Root, bales	lb.	.....	.09	.09	.08	.09	.08
Insect Flowers	lb.	.27	.28	.37	.18	.35	.22
Powdered, Pure, 200 lb bb	lb.	.34	.35	.46	.25	.45	.32
IPECAC ROOT, Carteagna, bags	lb.	4.00	4.25	4.25	2.70	3.30	2.35
Powdered, 220 lb bbls	lb.	4.30	4.45	4.45	3.20	3.65	3.15
Rio Whole, bags	lb.	3.80	4.00	4.00	2.85	3.40	2.80
Powdered, 110 lb bbls	lb.	3.40	3.50	3.50	3.40	3.50	3.25
Isinglass, American, 130 lb cases	lb.	.95	1.00	1.00	.95	1.00	.95
Russian (Beluga), boxes	lb.	4.50	.....	4.50	4.50	4.50	4.50
Jaborandi Leaves, bales	lb.	.22	.22½	.22½	.11½	.13	.13
Jalap Root, Whole, 150 lb bag	lb.	.40	.43	.45	.24	.21	.16
USP, Powd, 250 lb bbls	lb.	.45	.48	.50	.29	.26	.22
Japan Wax 24 lb cases	lb.	.18½	.19	.19	.18½	.19	.18½
JUNIPER BERRIES, 125 lb bags	lb.	.06½	.07	.09	.05	.07½	.05
Kamala, boxes	lb.	1.15	1.25	1.40	.82	1.00	.85
Karaya Gum, Powdered, bbls	lb.	.12	.20	.20	.12	.13	.12
Kava Kava Root, bags	lb.	.14	.15	.15	.14	.16	.15
Kino Gum, Black, cases	lb.	.50	.55	.55	.50	.55	.50
Kola Nuts, 150 lb bags	lb.	.14	.15	.15	.13	.15	.09
Lady Slipper Root, bags	lb.	1.10	1.15	1.30	.85	1.75	.78
Larkspur Seed, bags	lb.	.52	.57	.57	.40	.45	.30
Laurel Berries, bags	lb.	.08	.09	.09	.08	.09	.08
Leaves, Greek, bags	lb.	.05½	.06	.06	.05	.07	.04½
Italian, bales	lb.	.03½	.04	.04	.03½	.05	.03½
Lavender Flowers, Ordinary	lb.	.32	.35	.35	.32	.35	.30
Selected	lb.	.45	.46	.46	.43	.55	.40
Lemon Peel, bags	lb.	.09½	.10½	.13	.10	.10	.09½
LICORICE ROOT, Whole bbls	lb.	.12	.18	.18	.12	.18	.12
Spanish Natural bales	lb.	.05½	.07	.07	.05½	.07	.05½
Powdered, bbls	lb.	.09	.10	.10	.09	.10	.09
Selected 2 & 5 lb bdls	lb.	.13	.15	.15	.12½	.16	.12½
Cutting, 125 lb bags	ln.	.06½	.07	.07	.06½	.07	.06½
Turkish, 150 lb bales	lb.	.05	.....	.05	.05	.05	.05
Linden Flowers with leaves, bales	lb.	.23	.24	.27	.23	.33	.29
Without leaves, bales	lb.	.28	.29	.32	.28	.36	.27
Liverwort Leaves, bales	lb.	.18	.19	.20	.18	.20	.16
Lobelia, Herb, bales	lb.	.12	.13	.16	.12	.20	.15
Seed, bags	lb.	.45	.50	.65	.45	.75	.65
Lovage Root, Imp., bags	lb.	.35	.37	.37	.25	.27	.25
Lupulin N. F., tins	lb.	1.65	.....	1.75	1.65	1.75	1.75
Lycopodium, 88 lb. cases	lb.	.70	.72	.85	.70	1.00	.70
MACE SIAUW, No. 1, cases	lb.	.82	.83	.86	.82	.98	.88
Banda No. 1, cases	lb.	.92	.94	.98	.92	1.00	.94
Batavia No. 2, cases	lb.	.47	.50	.58	.47	.68	.56
Malva Flowers, Blue, bales	lb.	.55	.57	.57	.40	.70	.45
Black, bales	lb.	.40	.55	.60	.40	.60	.45
Leaves, bales	lb.	.14	.15	.15	.14	.15	.14
Manaca Root, bales	lb.	.....	.24	.24	.22	.22	.22
Manna, Large Flake, cases	lb.	.90	.92	.92	.75	.80	.65
Small Flake, cakes	lb.	.57	.60	.65	.52	.60	.50
Sorts, cases	lb.	.45	.50	.50	.45	.50	.45
Mandrake Root, bags	lb.	.12	.13	.14	.12	.18	.13
Marjoram, Herb							
French, No. 1 bales	lb.	.18½	.19	.19	.16	.18½	.13½
German, bales	lb.	.24	.25	.25	.22	.18½	.12
Mastic Gum, 120 lb cans	lb.	.65	.70	.70	.65	.70	.60
Matico Leaves, bales	lb.	.30	.31	.32	.30	.45	.31
Mezereon Bark, bags	lb.	.20	.25	.25	.20	.35	.20
Millet Seed, Yellow, bags	lb.	.03¾	.04½	.04½	.03¾	.04½	.03¾
Montan Wax, Crude, bags	lb.	.06½	.07	.07	.06½	.07	.06½
Bleached, bags	lb.	.25	.28	.28	.25	.28	.25
Moss, Iceland, bales	lb.	.10	.12	.11	.10	.12	.07½
Irish, Bleached, bales	lb.	.14	.17	.18	.13	.18	.11
Mullein Flowers, tins	lb.	1.35	1.40	2.00	1.35	2.25	2.00
Leaves, bales	lb.	.07½	.08	.98	.07½	.08	.07½
Musk Root, Russian, bags	lb.	.09	.10	.12	.09	.25	.11½
Myrrh Gum, 200 lb, cases	lb.	.32	.35	.65	.32	1.10	.55
Nutgalls, Chinese, bags	lb.	.22	.....	.22	.22	.22	.22
Aleppy, bags	lb.	.21	.....	.21	.21	.25	.21
Powdered, bags	lb.	.23	.....	.23	.23	.23	.23
Nutmegs, 110's cases	lb.	.26	.27	.31½	.26	.38	.30
75's & 80's cases	lb.	.38	.39	.42	.38	.50	.42
Grinding, bags	lb.	.24	.25	.25	.24	.29	.26½
NUX-VOMICA Buttons, bag	lb.	.05	.06	.06	.05	.05½	.04
Powdered, 200 lb bbls	lb.	.08½	.09	.09	.08	.08½	.08
Oak Bark, bags	lb.	.05	.05½	.05½	.05	.06½	.05
Olibanum Gum, 280 lb cases							
Siftings	lb.	.12½	.14	.15	.12½	.11½	.13
Tears, No. 1 Extra	lb.	.29	.30	.29	.27	.30	.26
No. 2	lb.	.18	.20	.23	.18	.20	.18
No. 3	lb.	.14	.16	.18	.14	.17	.14
Opium Gum, USP, cases	lb.	12.00	13.00	13.00	12.00	13.00	12.00
Granular, cans	lb.	13.00	14.00	14.00	13.00	14.00	13.00
Powdered, USP, cans	lb.	13.00	14.00	14.00	13.00	14.00	13.00
Orange Flowers, cases	lb.	.25	.....	.25	.25	.25	.25
Peel, Bitter, bags	lb.	.11	.12	.12½	.10	.11	.10
Sweet bags	lb.	.14	.15	.16	.11	.08½	.08½
ORRIS ROOT, Flor. bid. bags	lb.	.29	.30	.32	.17	.14½	.10
Powdered, 200 lb bbls	lb.	.32	.34	.35	.21	.17	.13
Verona, bags	lb.	.23	.24	.25	.16	.13	.09
Powdered, 200 lb bbls	lb.	.26	.27	.32	.20	.14	.11
Fingers, boxes	lb.	1.15	1.20	1.20	.90	.90	.80
Ozokerite Wax, Brown, Hard	lb.	.....	.....	.....	.....	.....	.....
Bags	lb.	.24	.25	.25	.24	.25	.24
Green, Hard, bags	lb.	.30	.31	.31	.30	.31	.30
Yellow, Refined, bags	lb.	.37	.....	.37	.37	.37	.37

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Gum Arabic Breaks

Gum Arabic, amber sorts, is quoted at 24 c @ 26c per lb This is a decline of 6c per lb. from the high price reached of 30c this year and represents the turning point in a commodity that has been steadily advancing for many months. This gum has not reached such a figure as 30c per lb. since 1917. The price started to climb back in February of this year when a poor crop was reported due to the severe weather experienced in the Sudan. The price was then 11c per lb. and the table of prices by months given below shows the rapid increase in the value of this product.

1929	*Price*
February	11c
March	15c
April	15c
May	15c
June	20c
July	20c
August	24c
September	28c
October	30c
November	30c

The decline during the past month is attributed to the fact that new crop is beginning to arrive in the primary market and the prospects for a large yield are good. This is too early a time, however, to state definitely the possibilities for the crop as not enough has arrived to judge. Then it must be born in mind that untimely or cold weather may yet retard the gathering of the gum or decrease the production.

However, lower prices are being quoted abroad on the immediate prospects, and dealers here, who have been carrying stocks of the old crop, are not willing to take any chances of carrying old crop at the very high figures that have prevailed, and are anxious to dispose of what they have before new goods begin to arrive here.

Weekly Statement of Detentions

Detentions of natural raw materials by the Food, Drug and Insecticide Administration of the Department of Agriculture are now reported weekly by Eastern inspection district controlling imports at the Port of New York. This information is supplied to those interested on mimiographed sheets.

This information is of real importance to large consumers as well as to importers and traders. The extent to which certain articles are being found below the required standards is immediately revealed. Consumers can tell whether the situation in any drug or essential oil is likely to become seriously short due to the action of the Department. Or they can tell whether or not certain products have, on the average, been running good or bad.

Golden seal root is easier at $2.70 to $2.80 per lb. Plentiful supply and competition for a small consuming market is responsible for the easy tone of this commodity.

Safron flowers are quoted at $10.50 and $11.50 per lb. There has been little demand with competition energetic. Replacement prices are also lower.

Myrrh gum is easier at 32c and 35c per lb. Plentiful supply and an inactive market caused a recession in price of about 6c per lb. during the past month.

	Current Market		1929 High	1929 Low	1928 High	1928 Low
Papain, Crude, 150 lb cases..lb.	3.10	3.15	3.50	2.95	4.90	3.45
Pure, Powdered, 10 lb bot..lb.	3.25	3.30	3.55	3.10	4.35	3.50
Paprika, bags.....lb.	.25½	.26	.33	.25½	.33	.23
Pareira Brava Root, bags....lb.	.13	.14	.14	.11	.12	.11
Passion Flower, bales.....lb.	.09	.10	.75	.09	.15	.06½
Patchouli Leaves, bales.....lb.	.22	.23	.23	.22	.29	.22
Pennyroyal, Herb, 100 lb bags .....lb.	.07	.....	.07	.07	.07	.07
Leaves, 100 lb bags.....lb.	.14	.16	.16	.14	.16	.14
PEPPERMINT LEAVES, Imp bales.....lb.	.65	.75	.75	.43	.50	.43
Domestic, bales.....lb.	.45	.46	.46	.24	.40	.24
Pichi Leaves, bags.....lb.	.13	.14	.16	.13	.14	.13
Pimento Select, bags.....lb.	.21	.21½	.30½	.21	.23	.16½
Pink Root, True, bags.....lb.	.55	.57	.60	.55	.75	.58
Pleurisy Root, bags.....lb.	.22	.23	.28	.21	.28	.22
Poke Berries, bags.....lb.	.....	.18	.30	.18	.30	.20
Root, 200 lb bales.....lb.	.08	.08½	.08½	.07½	.10	.07½
Pomegrant Bark of Root, bags .....lb.	.30	.35	.35	.20	.44	.20
Bark of Fruit, bags.....lb.	.25	.30	.30	.25	.30	.30
Bark of Tree, bags.....lb.	.18	.22	.22	.15	.21	.15
POPPY FLOWERS, Red, bags .....lb.	.55	.60	.60	.50	.65	.50
Heads, bags.....lb.	.50	.....	.50	.50	.50	.08
Prickly Ash Bark.....lb.	.14	.17	.17	.14	.17	.14
Southern bags.....lb.	.13½	.14	.14	.13½	.16	.13½
Northern, bags.....lb.	.15	.16	.18	.15	.25	.16
Berries, bags.....lb.	.20	.21	.21	.19	.22	.17½
Prince's Pine, bales.....lb.	.48	.50	.50	.15	.17	.14
Pulsatilla, Herb, bags.....lb.	.12	.13	.14	.12	.14	.11
Pumpkin Seed, bags.....lb.	.14	.15	.15	.14	.25	.14
Quassia Chips, bags.....lb.	.06½	.....	.06½	.06½	.06½	.06½
Quebracho, bulk, 125 lb. bbl.lb.	.30	.31	.31	.29	.36	.29
Root, bags.....lb.	.....	.07	.07	.07	.08	.07
Quince Seed, bags.....lb.	.80	.90	.80	.70	.80	.60
Cape, bags.....lb	.95	1.10	1.25	.80	1.50	.95
Rape Seed, South American, bags.....lb.	.05½	.06	.06	.05½	.06½	.04½
Dutch, bags.....lb.	.07	.07½	.07½	.06	.07½	.05½
Japanese, small bags.....lb.	.05½	.06½	.07	.05½	.07	.06½
Raspberries, Dried, bbls....lb.	.50	.60	.60	.45	.85	.45
Red Saunders, bags.....lb.	.08	.....	.08	.08	.08	.08
Rhatany Root, bags.....lb.	.12	.13	.13	.11	.12	.11
Rhubarb Root, HD, cases...lb.	.27	.28	.41	.27	.45	.38
Powdered, bbls.....lb	.33	.35	.46	.33	.53	.43
Rosemary Leaves, bales.....lb.	.05	.05½	.06	.04½	.06	.04½
Flowers, cases, bales.....lb.	.25	.30	.30	.25	.30	.25
Rose Petals, pale.....lb.	.40	.41½	.42½	.40	.45	.38
Red.....lb.	1.65	1.70	1.80	1.65	2.20	1.70
Rue, Herb, bales.....lb.	.18	.20	.20	.18	.20	.18
Sabadilla Seed, bags.....lb.	.28	.29	.34	.28	.35	.30
Powdered, bbls.....lb.	.30	.31	.39	.30	.38	.32
SAFFRON FLOWERS, American, bales.....lb.	.30	.35	.40	.30	.40	.29½
Valencia, 1 lb cans.....lb.	10.50	11.50	12.00	10.50	16.00	11.25
Sage Dalmatian, bales.....lb.	.05½	.06	.06	.05½	.07	.05½
Greek, bales.....lb.	.05½	.06	.06	.05½	.06	.04½
Sandarac Gum, 300 lb bbls..lb.	.70	.75	.75	.40	.43	.30
Sarsaparilla Root, Honduras, bales.....lb.	.53	.54	.55	.53	.58	.52
Mexican, bales.....lb.	.24	.26	.40	.24	.29	.20
Sassafras Bark, Ordinary, bales .....lb.	.14	.16	.16	.14	.17	.13½
Select, bales.....lb.	.22	.24	.28	.22	.27	.23
Savory Leaves, bale.....lb.	.08½	.09	.09	.08½	.10	.07½
Saw Palmetto Berries, bags.lb.	.09½	.10½	.12	.09½	.20	.11
Scammony Resin, boxes.....lb.	1.30	1.35	1.35	1.30	1.35	1.30
Root, bags.....lb.	.08½	.....	.08½	.08½	.08½	.08½
Senega Root, bags.....lb.	1.00	1.05	1.35	1.00	1.40	1.27
SENNA ALEX., 150 lb cases lb.	.25	.30	.30	.25	.30	.25
Half leaf 150 lb cases....lb.	.12½	.14½	.15	.12½	.15	.13
Sifting, 400 lb bales...lb.	.11	.11½	.11½	.10½	.11	.10½
Tinnevelly, Bold, 350 lb bales .....lb.	.16	.18	.18	.16	.20	.15
Medium Leaf.....lb.	.11	.12	.12	.10	.13½	.09
Small Leaf.....lb.	.07	.09	.10	.07	.10	.07
Pods, 350 lb.....lb.	.11	.11½	.11½	.08	.13	.08½
Powdered, 200 lb.....lb.	.....	.11	.11	.11	.10	.11
Serpentaria Root, bags.....lb.	.67	.70	.72	.65	.77	.70
Shellac, T. N., bags.....lb.	.57	.58	.58	.57	.58	.57
Simaruba Bark, bales.....lb.	.20	.25	.40	.20	.38	.05
Skullcap Leaves, Eastern, bales .....lb.	.....	.75	.75	.40	.40	.33
Western, bales.....lb.	.34	.35	.35	.18	.26	.18
Skunk Cabbage, Striped, bales .....lb.	.14	.16	.16	.14	.16	.14
Snake Root, Canada Natural, bags.....lb.	.27	.28	.28	.24	.30	.24
Canada, Stripped, bags...lb.	.55	.....	.55	.55	.55	.55
Soap Bark.....lb.	.14	.15	.15	.14	.15	.14
Cut, 125-175 lb bags...lb.	.12	.12½	.16	.12	.17	.16
Crushed, 200 lb bbls....lb.	.16	.....	.16	.16	.17	.16
Powdered, bbls.....lb.	.17	.....	.17	.17	.18	.18
Spearmint Leaves, American, bales.....lb.	.28	.33	.33	.25	.30	.25
Spermaceti, blocks, cakes, cases .....lb.	.32	.35	.35	.32	.35	.32
Spikenard Root, bags.....lb.	.18	.18½	.20	.18½	.25	.20
Squaw Vine, bales.....lb.	.20	.21	.21	.18	.21	.21
Squills, White.....lb.	.09	.10	.13	.09	.16	.08
Powdered, bulk.....lb.	.23	.25	.25	.20	.30	.15
Stavesacre Seed, bags.....lb.	.16	.17	.18	.16	.18	.15½
Stillingia Root, bags.....lb.	.09	.10	.12	.09	.12	.10
Stone Root, bags.....lb.	.08	.09	.09	.08	.09	.08
St. Ignatius Beans, bags....lb.	.14½	.15	.15	.14½	.15	.14½
St. John's Bread, bags.....lb.	.....	.09	.09	.09	.14½	.09
STRAMONIUM LEAVES, bales.....lb.	.16	.18	.20	.16	.20	.16
Seed, bags.....lb.	.07½	.....	.07½	.07½	.07½	.07½

{ Monthly Review }

Sudan Gum Acacia

In their monthly report, covering the period October 1 to 31, Boxall & Co. report that arrivals in Kordofan stations of gum of the 1928-1929 season were almost nil, amounting to eight tons only, against 126 tons last year; a shortage of 118 tons, or 93 per cent. The total arrivals of Kordofan gum from the beginning of the season to date amounted to 10,980 tons, compared with 16,450 tons for the corresponding period in the 1927-1928 season, a shortage of about 5,470 tons, or 33 per cent. With the shortage of inferior Hashab estimated at about 2,000 tons, the total shortage in Hashab gums against last season would amount to date to 7,470 tons.

Prices—El Obeid prices fell considerably, but considering the insignificance of the arrivals sold on that market (two tons for the whole month), it will be easily realized how little of an indication the El Obeid prices are at present. In any case, prices of spot goods abroad have eased in sympathy with the speculative prices for new crop gum quoted from this end.

Demand, on the whole, has been small. The repeated reductions of prices quoted for new crop have generally rendered buyers chary of placing their orders, and these two factors, small demand and lower prices, reacting on each other, resulting in still lower prices and smaller demand.

New Crop—Nine kantars (about 8 cwt.) of new crop have been brought to the markets. The quantity is in any case too small to form any indication as to when the new crop gum will start coming in sufficiently large quantities to be of real interest or whether the bulk of the crop will be early or late. It may be recalled that in previous years the new crop arrivals generally started towards the end of November or beginning of December.

Talha—The prices of ready goods fell 3s. per cwt. during October.

The following figures show the exports from January to September:—

Destination	1928 Jan.-Aug.	1928 Sept.	1928 Total	1929 Jan.-Aug.	1929 Sept.	1929 Total
Great Britain	3,502	181	3,683	2,681	114	2,795
U. S. A.	4,065	175	4,240	3,551	109	3,660
France	3,235	237	3,472	2,211	113	2,324
Germany	2,795	302	3,097	2,913	155	3,068
Italy	1,077	201	1,278	893	16	909
Belgium	1,395	113	1,508	818	36	854
Japan	614	5	619	386	5	391
Spain	308	36	344	189	—	189
Holland	496	53	549	377	17	394
Denmark	34	—	34	14	—	14
Norway & Sweden	238	74	312	100	—	100
Egypt	85	10	95	50	3	53
Australia and N. Z.	370	14	384	383	29	412
China	123	10	133	144	—	144
Canada	65	—	65	20	—	20
Argentine	77	—	77	46	—	46
Brazil	50	—	50	25	—	25
Uruguay	22	—	22	7	—	7
Finland	5	—	5	27	—	27
British India	172	—	172	84	—	84
Other countries in America	7	—	7	23	—	23
Other countries	31	17	48	37	—	37
Total tons	18,766	1,428	20,194	14,979	597	15,576

The export figures are made up of the following qualities:

	Hashab	Bleached	Talha	Total
January-Sept., 1928: Tons	17,976	320	1,898	20,194
January-Sept., 1929: Tons	12,602	189	2,785	15,576
Difference in 1929: Tons	—5,374	—131	+887	—4,618

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Strophanthus Seed, Kombe, bags lb.	2.25	2.50	2.00	3.00	2.00
Styrax Liquid, Artificial lb.	.26	.35	.26	.35	.26
Genuine, USP lb.	.40	.45	.40	.45	.36
Sunflower Seed, bags Calif. lb.	.06	.07	.06	.09	.06
South American, bags lb.	.07	.07½	.07	.07½	.06
Tamarinds, bbls. lb.	.09½	.10	.05	.06	.05
Kegs keg	3.85	3.75	3.85	3.85	3.85
Tansy, Herb, bales lb.	.15	.16	.11	.14	.11
Thus Gum, 280 lb bbls. lb.	.11½	.20	.11½	.20	.11½
THYME, Spanish, bales lb.	.14	.16	.08½	.09	.08½
French, bales lb.	.12	.12½	.08	.08½	.07
Tonga Root, bundles lb.	.42	.42	.42	.55	.42
Vine, bundles lb.	.42	.42	.42	.55	.42
Tonka Beans, Angostura Cases	1.75	1.85	2.00	1.75	2.00	1.90
Para cases lb.	.90	.90	.90	.90	.90
Surinam cases lb.	1.00	1.10	1.50	1.00	1.50	1.25
Tragacanth Gum, No 1, 100 lb cases lb	1.45	1.50	1.60	1.50	1.60	1.55
No. 2 lb.	1.30	1.40	1.50	1.30	1.50	1.40
No. 3 lb.	1.10	1.20	1.30	1.10	1.30	1.25
Powdered, 50 lb boxes lb.	.90	1.00	1.10	.90	1.10	.85
Turkish cases lb.	.50	.90	.90	.45	.45	.45
Turmeric Root Madras, bags lb.	.08½	.08½	.09	.08½	.12	.06
Aleppy bags lb.	.08½	.09	.10	.08½	.13	.06½
Powdered lb.	.13	.15	.15	.13	.15	.10
China bags lb.	.11	.12	.12	.11	.11	.09
Turpentine Venice True, 80 lb cases lb.	.32	.40	.40	.32	.40	.3
Artificial, 80 lb cases lb.	.17	.18	.18	.17	.17	.12
Uva Ursi Leaves, bales lb.	.06	.06½	.06½	.06	.07	.07
Valerian Root, Belgium, bags lb.	.22	.24	.30	.21	.30	.16
VANILLA BEANS, Mexican, whole, cases lb.	3.50	4.50	4.50	3.25	4.00	4 3.25
Cuts, cases lb.	3.15	3.30	3.30	2.50	2.75	2.50
Bourbon, cases lb.	1.75	2.35	2.65	1.75	2.75	2.00
South American, cases lb.	.....	3.00	3.00	2.50	2.75	2.50
Tahiti, Green, label cases lb.	1.75	2.00	2.50	1.75	2.50	2.25
Vetivert Root, 100 lb bags lb.	.25	.....	.25	.25	.30	.25
Violet Flowers, bags lb.	.75	.80	1.00	.68	.90	.63
Wahoo Bark of Root, bags lb.	.50	.51	.56	.51	.62	.51
Bark of Tree, bags lb.	.25	.26	.31	.25	.35	.25½
White Pine Bark, Roseed, bags lb.	.07½	.09½	.15	.07	.08	.07
White Poplar Bark, bags lb.	.06	.07½	.07½	.05½	.07	.05½
Wild Cherry Bark, Thin, Green lb.	.14	.15	.20	.14	...	.....
Rossed bales lb.	.11	.12	.12	.11	.12	.11
Thick Rossed, bales lb.	.09	.....	.09	.09	.09	.09
Thin Natural, bales lb.	.08	.09	.09	.07½	.08	.07½
Thick Natural, bales lb.	.06	.06½	.06½	.05	.06	.05
Wild Indigo Root, bags lb.	.14	.15	.15	.13	.14	.13
Willow Bark, bags lb.	.05	.05½	.05½	.05	.06	.05
White, bags lb.	.15	.....	.15	.15	.05	.15
Witch Hazel Bark, bags lb.	.07	.08	.08	.05½	.08	.06½
Leaves, bales lb.	.07	.08	.08	.06½	.....	.....
Wormseed, American, bags lb.	.10	.11	.13	.10	.20	.15
Levant, bags lb.	3.65	3.80	4.15	3.65	5.25	4.25
Wormwood, Herb, Imp., bales lb.	.08	.08½	.10½	.08	.10½	.10
Dock Root, bags lb.	.10	.11	.11	.10	.11	.10
Yerba Mate, bags lb.	.18	.20	.20	.18	.20	.18
Santa, bags lb.	.09½	.11	.11½	.09½	.11	.90½
Zedoary Root, bags lb.	.07	.08	.08	.06½	.07	.06½

Miscellaneous

Castor Oil, odorless, bbls. lb.	.....	.14½	.....	.....	.....	.....
Chalk drop, 175 lb. bbls. lb.	.....	.03½	.03½	.03½	.03½	.03½
Precip. light, 250 lb. cask lb.	.....	.04½	.04½	.04½	.04½	.04½
Heavy 540 lb. casks lb.	.....	.02½	.03½	.02½	.03½	.02½
Bulk ton	.....	5.00	5.00	5.00	5.00	5.00
English 7 lb. bags lb.	.....	.08½	.08½	.08½	.08½	.08½
Cocoa Butter, 12 lb. box lb.	.42	.45	.45	.42	.50	.40
Cod Liver Oil Nor. 30 gal. bbls. bbls.	29.00	30.00	36.00	22.00	48.00	38.00
Newfoundland bbl.	.....	30.00	46.00	30.00	46.00	46.00
Collodion U. S. P. 30 lb. dr. lb.	.....	.23	.23	.23	.23	.23
Corn Syrup 42° 50 gal. bbl. 100 lb.	3.91	4.16	4.16	3.91	4.51	3.31
Gelatin, USP, Silver 100 lb. cases lb.	.55	.60	.60	.55	.60	.55
Pure Food, 50 lb. bbl. lb.	.53	.55	.55	.55	.53	.53
Glucose, (grape sugar) dry 70° bags c-l NY 100 lb.	3.14	3.24	3.24	3.14	3.24	3.14
Haarlem Oil, bot 6 gross cases gross	.....	3.75	3.25	3.25	3.25	3.25
Imported, 5 gr. cs. gross	.....	3.50	3.50	3.50	3.50	3.50
Mineral Oil White, 50 gal. bbls. 80-85 vis. gal.	.50	.55	.67	.50	.67	.60
85-90 vis. gal.	.65	.70	.70	.65	.70	.65
125-130 vis. gal.	.75	.85	.92	.65	.92	.70
290 vis. gal.	.90	1.10	1.10	.90	1.10	1.00
Russian 110-115 vis. gal.	.70	.80	.80	.70	.75	.70
145-155 vis. gal.	.74	.84	.89	.67	.80	.67
320-330 vis. gal.	.82	.92	.97	.75	.95	.80
Olive Oil, Edible bbls. gal.	2.00	2.40				
Petrolatum, Lily White, USP, 400 lb. bbl lb.	.08	.09	.09	.08	.10	.09
Snow White USP, 400 lb. bbls. lb.	.09½	.10	.10	.09½	.13½	11½
Soap Castile, 50 lb. box lb.	.....	.25	.25	.25	.25	.25
USP, powd, 250 lb. bbl. lb.	.28	.30	.30	.28	.30	.28
USP, green, 450 lb. bbl. lb.	.07½	.07½	.07½	.07½	.07½	.07½

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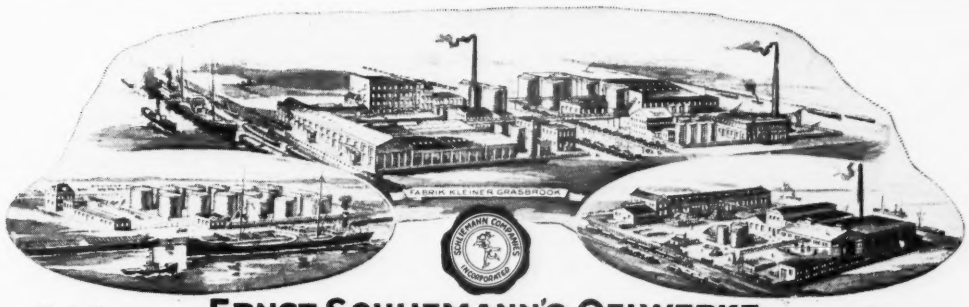

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Walgreen Company Analysis

Walgreen Co. is discussed in an analysis by John Nickerson & Co. According to this analysis, the 386 drug stores now included in the Walgreen chain, comprise 10% of all of the chain drug stores in the country. Company started with a single store in 1902, with the second unit added in 1909. The period of real growth started in 1916, when the company had eight stores with sales of $270,000 as compared with 231 stores and sales of $31,389,000 in 1928. Sales for the present year are estimated at $47,000,000.

Walgreen was a neighborhood chain in Chicago until 1922, when it invaded the business district of that city. No stores were established in the East until last year, but a number of units have been added there recently. The expansion of sales has followed a fairly consistent course, averaging approximately 50% increase annually. At the same time, the percentage earned on sales has risen from 5.3% in 1923, to 8.7% in 1928, with 8.5% estimated for the current year. All equipment items that are shortlived are charged off currently or over a period of months, while standard equipment is written off adequately. Net earnings in 1928 amounted to 50% of the average investment in fixed assets, and the average net earnings for the past five years were over 46% of average fixed assets. The analysis considers that Walgreen is justified in not paying dividends at this time in view of the fact that the company was able to show 27.7% earnings on invested capital this year. The company has practically unlimited fields for further expansion, according to the survey.

{ *New Incorporations* }

The Sterling Magnesia Co., Inc., Newark, N. J. Capital 1,000 shares common. David Yonteff, Newark, N. J.

Hansa Chemical Laboratory, Newark, N. J. Manufacture chemicals. Capital $100,000 pf, 10,000 shares common. Samuel Voltaggio, Newark, N. J.

Heinrich Chemical Co., Wilmington, Del. Toilet articles. Capital 2,000 shares common. Corp. Service Co., Wilmington, Del.

Dutch Druglet, Inc., Wilmington, Del. Druggists. Capital $10,000 Corp. Trust Co. of America, Wilmington, Del.

Universal Perfume Corp., New York. Delaware Charter. Perfumes, toilet articles. Capital 100,000 shares common. Prentice Hall, Inc., of Delaware.

Tinallium Chemical Corp., Wilmington, Del. Drugs, medicines. Capital $3,000,000, 1,000,000 shares common. Delaware Registration Trust Co., Wilmington, Del.

Electric Therapy Products Corp., Ltd., Wilmington, Del. Tubes, lamps, supplies of electro therapeutical nature. Capital 10,000 shares common. Corp. Trust Co. of America, Wilmington, Del.

Jarvaise Sales Corp., Wilmington, Del. Toilet articles. Capital 2,000 shares common. Corp. Service Co., Wilmington, Del.

The Lady Andres Products Corp., Wilmington, Del. Toilet articles, supplies. Capital $25,000. Corp. Service Co., Wilmington, Del.

Four Star Mfg. Co., Inc., Detroit, Mich. Delaware charter. Proprietary remedies, balsams. Capital $20,000. Franklin L. Mettler, Wilmington, Del.

Nalgiri, New York. Cosmetics. Capital 200 shares common. Gray & Gottlieb, 225 Broadway, New York, N. Y.

Knickerbocker Chemical Co., New York. Disinfectants. Capital $20,000. L. Da F. Brandon, 27 Cedar St., New York, N. Y.

Kissel Drug Corp., Brooklyn, N. Y. Capital $100,000. I. Enselman, 233 Broadway, New York, N. Y.

McKesson-St. Paul Drug Co., New York, N. Y. Delaware Charter. Capital 4,000 shares common. Corp. Trust Co. of America, Wilmington, Del.

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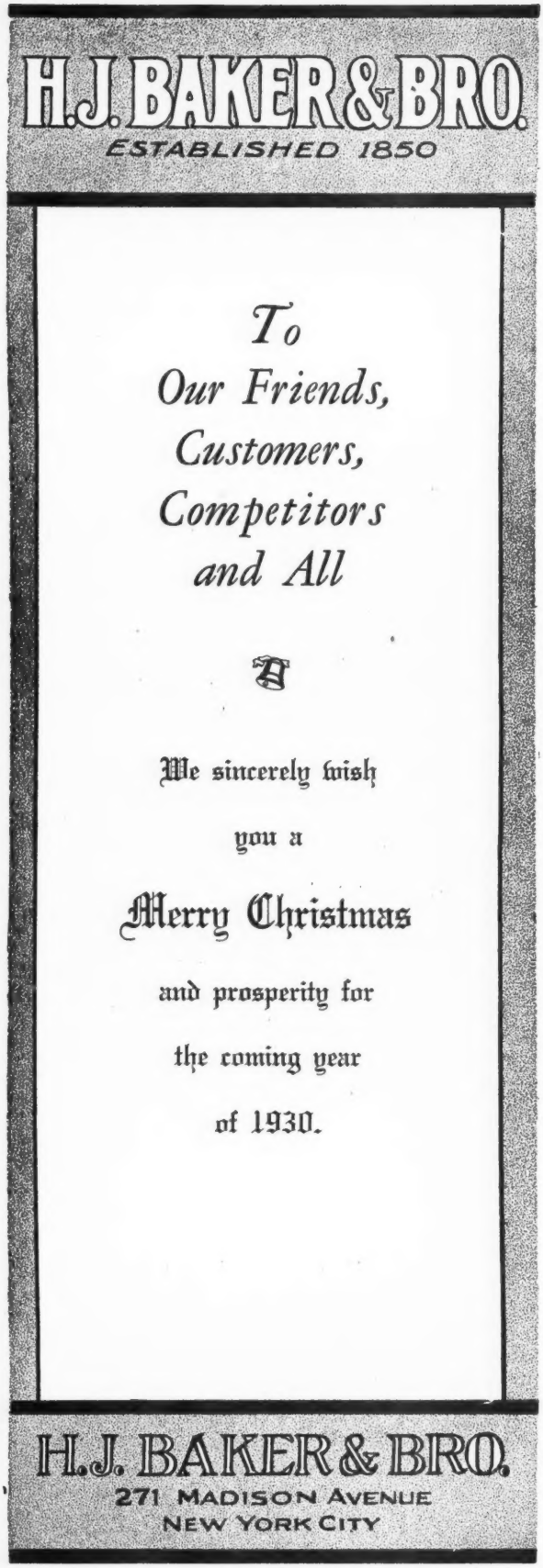

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Drug Markets

December 1929

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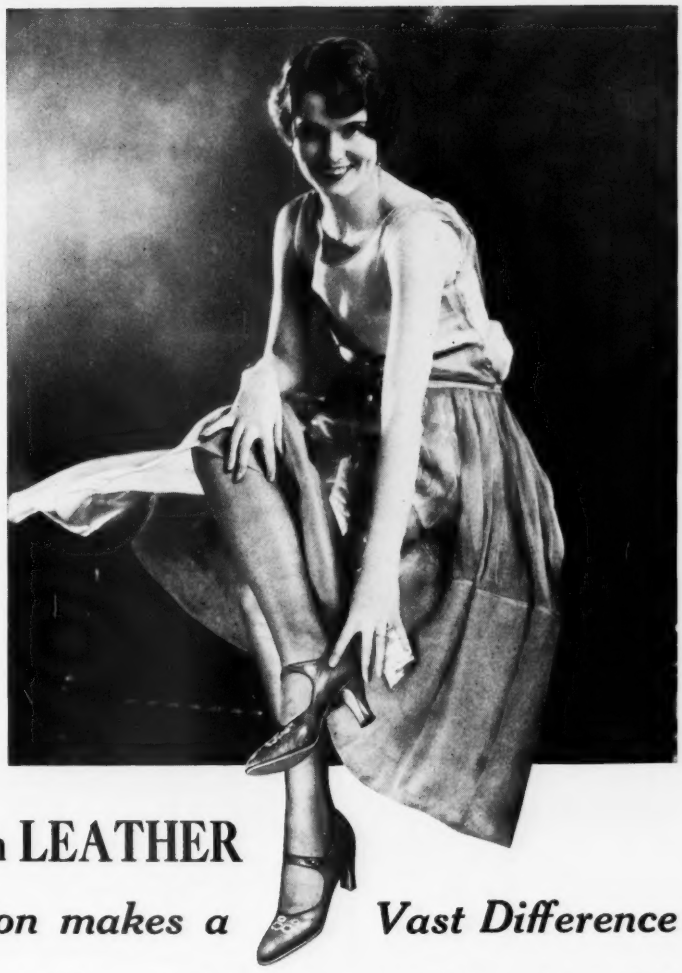

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